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$%^STN;HighlightOn=  ***;HighlightOff=***  ;

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 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  May 10   PROUSDDR now available on STN
 NEWS  4  May 19   PROUSDDR: One FREE connect hour, per account, in both May
                   and June 2004
 NEWS  5  May 12   EXTEND option available in structure searching
 NEWS  6  May 12   Polymer links for the POLYLINK command completed in REGISTRY
 NEWS  7  May 17   FRFULL now available on STN
 NEWS  8  May 27   New UPM (Update Code Maximum) field for more efficient patent
                   SDIs in CAplus
 NEWS  9  May 27   CAplus super roles and document types searchable in REGISTRY
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 NEWS 12  Jun 28   Additional enzyme-catalyzed reactions added to CASREACT
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 NEWS EXPRESS  MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
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FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004

=> file medline embase biosis caplus
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                                                       ENTRY    SESSION
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FILE 'EMBASE' ENTERED AT 12:34:16 ON 01 JUL 2004
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=> s everninomicin
L1          352 EVERNINOMICIN

=> s l1 (3a) biosynthe?
L2            4 L1 (3A) BIOSYNTHE?

=> s l1 and gene (2a)path?
L3            0 L1 AND GENE (2A) PATH?

=> s l1 and gene
L4           20 L1 AND GENE

=> s micromonospora
L5         3135 MICROMONOSPORA

=> s micromonospora carbonacea
L6           72 MICROMONOSPORA CARBONACEA

=> s actinomycete
L7         7464 ACTINOMYCETE

=> s l5 and l7
L8          327 L5 AND L7

=> s m. carbonacea
L9           21 M. CARBONACEA

=> s l6 or l9
L10          75 L6 OR L9

=> d hist

     (FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:34:16 ON 01 JUL 2004
L1          352 S EVERNINOMICIN
L2            4 S L1 (3A) BIOSYNTHE?
L3            0 S L1 AND GENE (2A)PATH?
L4           20 S L1 AND GENE
L5         3135 S MICROMONOSPORA
L6           72 S MICROMONOSPORA CARBONACEA
L7         7464 S ACTINOMYCETE
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L8          327 S L5 AND L7
L9           21 S M. CARBONACEA
L10          75 S L6 OR L9

=> s l10 and l1
L11          26 L10 AND L1

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12          20 DUP REM L11 (6 DUPLICATES REMOVED)

=> d ibib abs kwic total

L12  ANSWER 1 OF 20  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2002:778209  CAPLUS
DOCUMENT NUMBER:          137:290031
TITLE:                    Gene and protein sequences for identifying and
                          distinguishing orthosomycin biosynthetic loci in
                          microbial cultures
INVENTOR(S):              Farnet, Chris M.; Zazopoulos, Emmanuel; Staffa,
                          Alfredo
PATENT ASSIGNEE(S):       Ecopia Biosciences Inc., Can.
SOURCE:                   PCT Int. Appl., 511 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   3
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
     WO 2002079505      A2   20021010      WO 2002-CA432    20020328
     WO 2002079505      A3   20031009
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     EP 1373309         A2   20040102      EP 2002-713968   20020328
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.:                  US 2001-279095P  P  20010328
                                        US 2001-279709P  P  20010330
                                        US 2001-285214P  P  20010420
                                        WO 2002-CA432    W  20020328
AB   The invention provides compns. and methods useful to identify orthosomycin
     biosynthetic gene clusters.  The invention also provides compns. and
     methods useful to distinguish  ***everninomicin***  -type orthosomycin
     gene clusters and avilamycin-type orthosomycin gene clusters.  Thus, gene
     and encoded open reading frame sequences are provided for
       ***everninomicin***  biosynthetic loci from  ***Micromonospora***
       ***carbonacea***  aurantiaca and  ***M***  .  ***carbonacea***
```

africana, and the avilamycin-type loci from Streptomyces mobaraensis. An orthosomycin gene cluster may be identified using compns. of the invention such as hybridization probes, PCR primers derived from specific protein families responsible for the unique structural features that distinguish orthosomycins, ***everninomicin*** -type orthosomycins and avilamycin-type orthosomycins. An orthosomycin gene cluster may be identified using compns. of the invention such as the sequence code for the ref. sequences stored on computer readable medium.

AB The invention provides compns. and methods useful to identify orthosomycin biosynthetic gene clusters. The invention also provides compns. and methods useful to distinguish ***everninomicin*** -type orthosomycin gene clusters and avilamycin-type orthosomycin gene clusters. Thus, gene and encoded open reading frame sequences are provided for ***everninomicin*** biosynthetic loci from ***Micromonospora*** ***carbonacea*** aurantiaca and ***M*** . ***carbonacea*** africana, and the avilamycin-type loci from Streptomyces mobaraensis. An orthosomycin gene cluster may be identified using compns. of the invention such as hybridization probes, PCR primers derived from specific protein families responsible for the unique structural features that distinguish orthosomycins, ***everninomicin*** -type orthosomycins and avilamycin-type orthosomycins. An orthosomycin gene cluster may be identified using compns. of the invention such as the sequence code for the ref. sequences stored on computer readable medium.

ST orthosomycin biosynthetic gene cluster sequence Micromonospora Streptomyces; ***everninomicin*** biosynthetic gene cluster sequence Micromonospora; avilamycin biosynthetic gene cluster sequence Streptomyces

IT ***Micromonospora*** ***carbonacea*** africana
Micromonospora ***carbonacea*** aurantiaca
Microorganism
Nucleic acid hybridization
PCR (polymerase chain reaction)
Streptomyces mobaraensis
(gene and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

IT 11051-71-1, Avilamycin 53024-98-9, ***Everninomicin*** 128808-89-9, Orthosomycin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

L12 ANSWER 2 OF 20 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2002688492 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12444681
TITLE: Isolation and characterization of novel oligosaccharides related to Ziracin.
AUTHOR: Chu Min; Mierzwa Ronald; Jenkins John; Chan Tze-Ming; Das Pradip; Pramanik Birendra; Patel Mahesh; Gullo Vincent
CORPORATE SOURCE: Schering-Plough Research Institute, 2015 Galloping Hill Road, Kenilworth, New Jersey 07033, USA..
min.chu@spcorp.com
SOURCE: Journal of natural products, (2002 Nov) 65 (11) 1588-93.
Journal code: 7906882. ISSN: 0163-3864.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303

ENTRY DATE: Entered STN: 20021214
Last Updated on STN: 20030312
Entered Medline: 20030311

AB Five novel oligosaccharide antibiotics, Sch 58769 (1), Sch 58771 (2), Sch 58773 (3), Sch 58775 (4), and Sch 58777 (5), were isolated from the fermentation broth of ***Micromonospora*** ***carbonacea*** var africana. Their structures were determined by spectroscopic methods, including MS and (1)H and (13)C NMR experiments. A comparison of the obtained data with that for Ziracin (Sch 27899) revealed that these oligosaccharides belong to the same ***everninomicin*** family of compounds. Ziracin demonstrates potent activity against Gram-positive bacteria both in vitro and in vivo including multiply resistant strains of methicillin-resistant Staphylococcus aureus and vancomycin-resistant Enterococci faecalis.

AB . . . Sch 58771 (2), Sch 58773 (3), Sch 58775 (4), and Sch 58777 (5), were isolated from the fermentation broth of ***Micromonospora*** ***carbonacea*** var africana. Their structures were determined by spectroscopic methods, including MS and (1)H and (13)C NMR experiments. A comparison of the obtained data with that for Ziracin (Sch 27899) revealed that these oligosaccharides belong to the same ***everninomicin*** family of compounds. Ziracin demonstrates potent activity against Gram-positive bacteria both in vitro and in vivo including multiply resistant strains. . .

RN ***53024-98-9 (everninomicin)***

L12 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:565072 CAPLUS
DOCUMENT NUMBER: 135:148261
TITLE: The ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in the development of new antibiotics
INVENTOR(S): Staffa, Alfredo; Zazopoulos, Emmanuel; Mercure, Stephane; Nowacki, Piotr
PATENT ASSIGNEE(S): Ecopia Biosciences Inc., Can.; Farnet, Chris
SOURCE: PCT Int. Appl., 177 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001055180	A2	20010802	WO 2001-CA128	20010129
WO 2001055180	A3	20020110		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1252316	A2	20021030	EP 2001-903544	20010129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.: US 2000-177711P P 20000127
WO 2001-CA128 W 20010129

AB The present invention relates to isolated genetic sequences encoding proteins which direct the biosynthesis of the antibiotic ***everninomicin*** in ***Micromonospora*** ***carbonacea*** . The isolated biosynthetic gene cluster serves as a substrate for bioengineering of antibiotic structures.

TI The ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in the development of new antibiotics

AB The present invention relates to isolated genetic sequences encoding proteins which direct the biosynthesis of the antibiotic ***everninomicin*** in ***Micromonospora*** ***carbonacea*** . The isolated biosynthetic gene cluster serves as a substrate for bioengineering of antibiotic structures.

ST Micromonospora ***everninomicin*** biosynthesis gene cluster sequence; antibiotic design ***everninomicin*** biosynthesis gene cluster sequence

IT ***Micromonospora*** ***carbonacea***
(***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(ORF, of ***everninomicin*** biosynthesis gene cluster; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Drug design
(of antibiotic ***everninomicin*** derivs.; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Genetic engineering
(of antibiotic synthesis; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT DNA sequences
(of ***everninomicin*** biosynthesis gene cluster of ***Micromonospora*** ***carbonacea*** ; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Protein sequences
(of open reading frames of ***everninomicin*** biosynthesis gene cluster of ***Micromonospora*** ***carbonacea*** ; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Gene
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(open reading frame, of ***everninomicin*** biosynthesis gene cluster; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Genetic polymorphism

(single nucleotide, in ***everninomicin*** biosynthesis gene cluster; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT 53024-98-9D, ***Everninomicin*** , analogs, derivs.
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT 352404-35-4 352404-38-7 352404-39-8 352404-40-1 352404-42-3
352404-43-4 352404-44-5 352404-45-6 352404-46-7 352404-47-8
352404-48-9 352404-49-0 352404-50-3 352404-51-4 352404-52-5
352404-53-6 352404-54-7 352404-56-9 352404-57-0 352404-58-1
352404-59-2 352404-60-5 352404-61-6 352404-62-7 352404-63-8
352404-64-9 352404-65-0 352404-66-1 352404-67-2 352404-68-3
352404-70-7 352404-71-8 352404-72-9 352404-73-0 352404-74-1
352404-75-2 352404-76-3 352404-77-4 352404-78-5 352404-80-9
352404-82-1 352404-83-2 352404-84-3 352404-85-4 352404-86-5
352404-87-6 352404-88-7 352404-89-8 352404-90-1 352434-69-6
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(amino acid sequence; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT 352404-34-3 352404-36-5 352404-37-6 352404-41-2 352404-55-8
352404-69-4 352404-79-6 352404-81-0
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; ***Micromonospora*** ***carbonacea*** gene cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

L12 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:526200 CAPLUS
DOCUMENT NUMBER: 135:133123
TITLE: ***Everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***
INVENTOR(S): Hosted, Thomas J.; Horan, Ann C.; Wang, Tim X.
PATENT ASSIGNEE(S): Schering Corporation, USA
SOURCE: PCT Int. Appl., 109 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051639	A2	20010719	WO 2001-US1187	20010112
WO 2001051639	A3	20020228		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2004101832 A1 20040527 US 2001-758759 20010111

PRIORITY APPLN. INFO.: US 2000-175751P P 20000112

AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin ***everninomicin*** and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the ***everninomicin*** structure. The DNA sequence for the gene clusters responsible for encoding ***everninomicin*** biosynthetic genes, which provide the machinery for producing ***everninomicin*** , are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel ***everninomicin*** related compds. based on ***everninomicin*** , arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in ***everninomicin*** . A Micromonospora site-specific integrase gene is also provided, which can be incorporated in a vector for integration into any actinomycete, and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an actinomycete chromosome using this particular vector.

TI ***Everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***

AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin ***everninomicin*** and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the ***everninomicin*** structure. The DNA sequence for the gene clusters responsible for encoding ***everninomicin*** biosynthetic genes, which provide the machinery for producing ***everninomicin*** , are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel ***everninomicin*** related compds. based on ***everninomicin*** , arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in ***everninomicin*** . A Micromonospora site-specific integrase gene is also provided, which can be incorporated in a vector for integration into any actinomycete, and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an actinomycete chromosome using this particular vector.

ST sequence gene ***everninomicin*** biosynthesis Micromonospora; integrase gene sequence Micromonospora

; BIOL (Biological study); PREP (Preparation)

(evrS; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(evrT; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(evrU; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(evrV; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrW; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrX; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrY; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrZ; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsA; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsB; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsC; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(heat stress, homol.; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Flavoproteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hydrogen ion-sodium-exchanging; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(membrane; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(multidrug; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf10; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf11; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf1; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf2; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf3; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf4; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf5; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf6; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf7; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf8; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST

(Analytical study); BIOL (Biological study); PREP (Preparation)
(orf9; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Enzymes, analysis
RL: ANT (Analyte); ANST (Analytical study)
(tailoring; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT Transcription factors
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(.sigma.; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT 351394-42-8P 351394-43-9P 351394-44-0P 351394-46-2P 351394-47-3P
351394-48-4P 351394-49-5P 351394-50-8P 351394-51-9P 351394-52-0P
351394-53-1P 351394-54-2P 351394-55-3P 351394-56-4P 351394-57-5P
351394-58-6P 351394-59-7P 351394-60-0P 351394-61-1P 351394-62-2P
351394-63-3P 351394-64-4P 351394-65-5P 351394-66-6P 351394-67-7P
351394-68-8P 351394-69-9P 351394-70-2P 351394-71-3P 351394-72-4P
351394-73-5P 351394-74-6P 351394-75-7P 351394-76-8P 351394-77-9P
351394-78-0P 351394-79-1P 351394-80-4P 351394-81-5P 351394-82-6P
351394-83-7P 351394-84-8P 351394-85-9P 351394-86-0P 351394-87-1P
351394-88-2P 351394-89-3P 351394-90-6P 351394-91-7P 351394-92-8P
351394-93-9P 351394-94-0P 351394-95-1P 351394-96-2P 351394-97-3P
351394-98-4P 351394-99-5P 351395-00-1P 351395-01-2P 351395-02-3P
351395-03-4P 351395-04-5P 351395-05-6P 351395-06-7P 351395-07-8P
351395-08-9P 351395-09-0P 351395-10-3P 351395-11-4P 351395-12-5P
351395-13-6P 351395-14-7P 351395-15-8P 351395-16-9P 351395-17-0P
351395-18-1P 351395-19-2P 351395-20-5P 351395-21-6P 351395-22-7P
351395-23-8P 351395-24-9P 351395-25-0P 351395-26-1P 351395-27-2P
351395-29-4P 351395-30-7P 351395-31-8P 351395-32-9P 351395-33-0P
351395-34-1P 351395-35-2P 351395-36-3P 351395-37-4P 351395-38-5P
351395-39-6P 351395-40-9P 351395-41-0P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT 480-64-8P, orsellinic acid
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(biosynthesis; ***everninomicin*** biosynthetic genes in
Micromonospora ***carbonacea***)

IT 9033-07-2, glycosyltransferase
RL: ANT (Analyte); ANST (Analytical study)
(***everninomicin*** biosynthetic genes in ***Micromonospora***
carbonacea)

IT 9001-18-7P, lipoamide dehydrogenase 9001-40-5P, Dehydrogenase, glucose-6-phosphate 9001-63-2P, Lysozyme 9001-92-7P, Protease 9012-30-0P, acetyltransferase 9015-72-9P, Dehalogenase 9023-90-9P, Methylmalonyl-CoA mutase 9023-94-3P, propionyl-CoA carboxylase 9026-03-3P, DTDP-glucose synthetase 9026-39-5P, Uridine kinase 9026-43-1P, Serine threonine kinase 9026-97-5P, Deoxyribose-phosphate aldolase 9027-41-2P, Hydrolase 9028-86-8P, Aldehyde dehydrogenase 9028-93-7P, IMP dehydrogenase 9030-24-4P, uracil phosphoribosyltransferase 9031-09-8P, Phosphotransferase 9031-96-3P, peptidase 9033-25-4P, methyl transferase 9035-73-8P, Oxidase 9045-37-8P, 6-Methylsalicylate synthetase 37211-59-9P, GDP-mannose

4,6-dehydratase 37259-54-4P, DTDP-glucose dehydratase 39369-30-7P, rRNA methyltransferase 52350-85-3P, integrase 59536-73-1P, Phosphomannomutase 67340-07-2P, Acyl-CoA carboxylase 121684-25-1P, Orsellinic acid synthase 128964-89-6P, cytochrome D oxidase 259093-18-0P, Epimerase, thymidine diphosphoglucose
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT 53024-98-9P, ***everninomicin***
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT 9031-66-7P, Aminotransferase 9044-86-4P, Dehydratase 9055-15-6P, Oxidoreductase 37342-00-0P, Epimerase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hexose; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT 9035-51-2P, P450, properties 9046-59-7P, Hydroxylase 9055-20-3P, Chloroperoxidase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT 9028-06-2P, L-Proline-4-hydroxylase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homolog; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT 351395-28-3P 351395-42-1P 351540-05-1P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(nucleotide sequence; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT 351396-41-3 351396-42-4 351396-43-5 351396-44-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; ***everninomicin*** biosynthetic genes in ***Micromonospora*** ***carbonacea***)

IT 351396-45-7 351396-46-8 351396-47-9 351396-48-0 351396-49-1
RL: PRP (Properties)
(unclaimed sequence; ***everninomicin*** biosynthetic genes in ***Micromonospora*****

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SYSTEM LIMITS EXCEEDED
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***L12 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN ***
ACCESSION NUMBER: 2000:441957 CAPLUS
DOCUMENT NUMBER: 133:72987
TITLE: Process for recovering lipophilic oligosaccharide
*** antibiotics***
INVENTOR(S): Alroy, Yair; Blaisdell, Steven; Morenberg, Allan;
*** Schaefer, Eugene***

PATENT ASSIGNEE(S): Schering Corporation, USA
SOURCE: PCT Int. Appl., 25 pp.
*** CODEN: PIXXD2***
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
*** ***

***	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE***
***	WO 2000037670	A1	20000629	WO 1999-US27937	19991216***

*** W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CZ,***
*** DE, DK, DM, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP,***
*** KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, NO,***
*** NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,***
*** UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM***
*** RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,***
*** DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,***
*** CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG***
***PRIORITY APPLN. INFO.: US 1998-215689 A 19981218 ***
OTHER SOURCE(S): MARPAT 133:72987
AB A process for recovering a lipophilic oligosaccharide antibiotic from an
*** aq. fermn. broth contg. the lipophilic oligosaccharide antibiotic admixed***
*** with impurities, byproducts and/or suspended solids, comprising: a)***
*** combining said fermn. broth with an adsorbent; b) adjusting the pH of the***
*** broth to alk. in order to solubilize the antibiotic in the broth; c)***
*** allowing sufficient time for the solubilized antibiotic in the alk. broth***
*** to be adsorbed by the adsorbent; d) adjusting the pH of the broth to about***
*** neutral in order to stabilize the antibiotic adsorbed on the adsorbent;***
*** and e) sepg. the adsorbent to which the antibiotic is adsorbed from the***
*** broth. A medium for storing an oligosaccharide antibiotic comprising an***
*** adsorbent having a lipophilic oligosaccharide antibiotic adsorbed thereon***
*** is also disclosed.***
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
*** RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT***
IT Fermentation
*** ***Micromonospora*** ***carbonacea*** africana
(recovering lipophilic oligosaccharide antibiotics from fermns. using adsorbents)

IT 53024-98-9P, ***Everninomicin*** 109545-83-7P 109545-84-8P 109545-85-9P
RL: BMF (Bioindustrial manufacture); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(recovering lipophilic oligosaccharide antibiotics from fermns. using adsorbents)

L12 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:595380 CAPLUS
DOCUMENT NUMBER: 133:319428
TITLE: A novel ***everninomicin*** antibiotic active against multidrug-resistant bacteria
AUTHOR(S): Chu, M.; Mierzwa, R.; Patel, M.; Jenkins, J.; Das, P.; Pramanik, B.; Chan, T.-M.
CORPORATE SOURCE: Schering-Plough Research Institute, Kenilworth, NJ, 07033, USA
SOURCE: Tetrahedron Letters (2000), 41(35), 6689-6693
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel oligosaccharide, Sch 58761 (I), was isolated from the fermn. broth of Micromonospora carbonaceae using diol-bonded/polyvinyl alc.-functionalized silica gel (PVA-Sil) purifn. Structure detn. of I was accomplished by extensive mass spectrometric and NMR studies. I exhibited potent antibacterial activity against various multidrug-resistant, Gram-pos. organisms.
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI A novel ***everninomicin*** antibiotic active against multidrug-resistant bacteria
IT Antibiotic resistance
Gram-positive bacteria (Firmicutes)
(novel ***everninomicin*** antibiotic active against multidrug-resistant bacteria)
IT ***Micromonospora*** ***carbonacea***
(novel ***everninomicin*** antibiotic from Micromonospora carbonaceae that is active against multidrug-resistant bacteria)
IT 189881-87-6P, Sch 58761
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(novel ***everninomicin*** antibiotic active against multidrug-resistant bacteria)

L12 ANSWER 7 OF 20 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001087001 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11132948
TITLE: Ziracin, a novel oligosaccharide antibiotic.
AUTHOR: Ganguly A K
CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Stevens Institute of Technology, Hoboken, NJ 07030, USA.
SOURCE: Journal of antibiotics, (2000 Oct) 53 (10) 1038-44. Ref: 8
Journal code: 0151115. ISSN: 0021-8820.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)

(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20021217
Entered Medline: 20010118

AB Ziracin is produced by ***Micromonospora*** ***carbonacea*** and is highly active against Gram-positive bacteria. In particular it is highly active against methicillin resistant staphylococci and vancomycin resistant enterococci. Ziracin, C71H97NO38Cl2, contains two orthoester linkages, a nitro sugar, a methylene dioxy group, two aromatic ester residues and thirty five centres of assymmetries. In this paper a brief description of the structural elucidation of ziracin is presented along with the chemical modification of the antibiotic which has led to the identification of several potent antibacterials.

AB Ziracin is produced by ***Micromonospora*** ***carbonacea*** and is highly active against Gram-positive bacteria. In particular it is highly active against methicillin resistant staphylococci and vancomycin resistant. . .

RN ***53024-98-9 (everninomicin)***

L12 ANSWER 8 OF 20 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 1999440610 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10512059
TITLE: Pharmacologic and bacteriologic properties of SCH-27899 (Ziracin), an investigational antibiotic from the ***everninomicin*** family.
AUTHOR: Foster D R; Rybak M J
CORPORATE SOURCE: Department of Pharmacy Practice, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan, USA.
SOURCE: Pharmacotherapy, (1999 Oct) 19 (10) 1111-7. Ref: 34
Journal code: 8111305. ISSN: 0277-0008.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 20000113
Last Updated on STN: 20021217
Entered Medline: 19991201

AB SCH-27899 is an investigational antibiotic from the ***everninomicin*** family, a group of oligosaccharide antibiotics produced by ***Micromonospora*** ***carbonacea*** . Information regarding the pharmacology, pharmacodynamics, pharmacokinetics, efficacy, and toxicity of this agent was obtained from a MEDLINE search and a review of abstracts presented at recent scientific meetings. SCH-27899 has in vitro bacteriostatic activity against a wide variety of gram-positive organisms, including highly resistant organisms such as methicillin-resistant Staphylococcus aureus, vancomycin-intermediate-sensitivity S. aureus, Streptococcus pneumoniae (both penicillin-susceptible and -nonsusceptible), and vancomycin-resistant enterococci. In vitro data, animal studies, and preliminary human studies indicate that it is effective and fairly well tolerated. Its place in therapy remains to be

determined, and clinical trials continue.
TI Pharmacologic and bacteriologic properties of SCH-27899 (Ziracin), an investigational antibiotic from the ***everninomicin*** family.
AB SCH-27899 is an investigational antibiotic from the ***everninomicin*** family, a group of oligosaccharide antibiotics produced by ***Micromonospora*** ***carbonacea*** . Information regarding the pharmacology, pharmacodynamics, pharmacokinetics, efficacy, and toxicity of this agent was obtained from a MEDLINE search and a. . .
RN ***53024-98-9 (everninomicin)***

L12 ANSWER 9 OF 20 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1994:426472 BIOSIS
DOCUMENT NUMBER: PREV199497439472
TITLE: In vitro antibacterial activity of ***everninomicin*** (SCH 27899) compared with vancomycin and teicoplanin against clinical isolates of staphylococci.
AUTHOR(S): Masmoudi, A. [Reprint author]; Caillon, J.; Mazeau, C. [Reprint author]; Minozzi, C.; Miller, G.; Bismuth, R. [Reprint author]
CORPORATE SOURCE: Hopital Pitie Salpetriere, Paris, France
SOURCE: Program and Abstracts of the Interscience Conference on Antimicrobial Agents and Chemotherapy, (1993) Vol. 33, No. 0, pp. 203.
Meeting Info.: 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy. New Orleans, Louisiana, USA. October 17-20, 1993.
ISSN: 0733-6373.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Oct 1994
Last Updated on STN: 10 Nov 1994
TI In vitro antibacterial activity of ***everninomicin*** (SCH 27899) compared with vancomycin and teicoplanin against clinical isolates of staphylococci.
IT Major Concepts
Infection; Pharmacology
IT Chemicals & Biochemicals
VANCOMYCIN; TEICOPLANIN; ***EVERNINOMICIN***
IT Miscellaneous Descriptors
ANTIBACTERIAL-DRUG; ***EVERNINOMICIN*** ; MEETING ABSTRACT; MEETING POSTER; TEICOPLANIN; VANCOMYCIN
ORGN Classifier
Actinoplanetes 08830
Super Taxa
Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Micromonospora ***carbonacea***
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name

human
Taxa. . .
RN 1404-90-6 (VANCOMYCIN)
61036-62-2 (TEICOPLANIN)
53024-98-9 (***EVERNINOMICIN***)

L12 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1977:30015 CAPLUS
DOCUMENT NUMBER: 86:30015
TITLE: Structure of ***everninomicin*** -2
AUTHOR(S): Ganguly, A. K.; Szmulewicz, S.; Sarre, O. Z.; Girijavallabhan, V. M.
CORPORATE SOURCE: Chem. Res. Dep., Schering Corp., Bloomfield, NJ, USA
SOURCE: Journal of the Chemical Society, Chemical Communications (1976), (15), 609-11
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The structure of ***everninomicin*** -2 (I; R = H), an antibiotic produced by ***Micromonospora*** ***carbonacea*** , was detd. by 13C NMR and chem. means. ***Everninomicin*** D (I; R = II) was converted to ***everninomicin*** -2 in .apprx.30% overall yield, via (hydroxylamino) ***everninomicin*** D and nitrosoeverninomicin D.
TI Structure of ***everninomicin*** -2
AB The structure of ***everninomicin*** -2 (I; R = H), an antibiotic produced by ***Micromonospora*** ***carbonacea*** , was detd. by 13C NMR and chem. means. ***Everninomicin*** D (I; R = II) was converted to ***everninomicin*** -2 in .apprx.30% overall yield, via (hydroxylamino) ***everninomicin*** D and nitrosoeverninomicin D.
ST ***everninomicin*** 2 Micromonospora structure; antibiotic
everninomicin 2 structure
IT Micromonospora
(***everninomicin*** -2 of, structure of)
IT 14762-74-4, properties
RL: PRP (Properties)
(NMR of, in ***everninomicin*** -2)

L12 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1976:44595 CAPLUS
DOCUMENT NUMBER: 84:44595
TITLE: Structure of ***everninomicin*** C
AUTHOR(S): Ganguly, Ashit K.; Szmulewicz, Sol
CORPORATE SOURCE: Chem. Res. Dep., Schering Corp., Bloomfield, NJ, USA
SOURCE: Journal of Antibiotics (1975), 28(9), 710-12
CODEN: JANTAJ; ISSN: 0021-8820
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The title compd. had structure I as detd. by mass spectroscopy, NMR, uv, and ir.
TI Structure of ***everninomicin*** C
ST ***everninomicin*** C; olgose C
IT ***Micromonospora*** ***carbonacea***
(***everninomicin*** C of, structure of)
IT Molecular structure, elucidated
(of ***everninomicin*** C)

L12 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1975:68722 CAPLUS
DOCUMENT NUMBER: 82:68722
TITLE: Microbiological characterization of everninomicins B and D
AUTHOR(S): Sanders, W. Eugene; Sanders, Christine C.
CORPORATE SOURCE: Sch. Med., Creighton Univ., Omaha, NE, USA
SOURCE: Antimicrobial Agents and Chemotherapy (1974), 6(3), 232-8
CODEN: AMACCQ; ISSN: 0066-4804
DOCUMENT TYPE: Journal
LANGUAGE: English
AB ***Everninomicin*** D [39340-46-0] and ***everninomicin*** B [50925-95-6] are components of a complex of antibiotic substances produced by ***Micromonospora*** ***carbonacea*** . Both were shown to be highly active inhibitors of growth of all gram-pos. bacteria, Neisseria, and Bacteroides studied in vitro. Potency of activity appeared to be greater than that of chloramphenicol [56-75-7], but less than that of penicillin G [61-33-6] when assayed against strains susceptible to each of the drugs. The everninomicins were bacteriostatic for all strains tested, except group A streptococci. No facultatively anaerobic gram-neg. bacilli were susceptible. Resistant mutants were selected with difficulty from susceptible straphylococci in the lab. These showed no cross-resistance to available antimicrobial agents. Most variations in media, growth conditions, or procedure of assay had little or no effect on antimicrobial activity. Only addn.. of serum or increase in inoculum size reduced antibacterial activity. Differences in activity of the 2 components were encountered infrequently; the B component was 4-6-fold more active against gonococci and group A streptococci, and the D component was 4-fold more active against enterococci. Because of the high degree of in vitro activity and lack of resistance among susceptible genera of bacteria, the everninomicins clearly merit further careful study as potential therapeutic agents.
AB ***Everninomicin*** D [39340-46-0] and ***everninomicin*** B [50925-95-6] are components of a complex of antibiotic substances produced by ***Micromonospora*** ***carbonacea*** . Both were shown to be highly active inhibitors of growth of all gram-pos. bacteria, Neisseria, and Bacteroides studied in vitro. Potency of activity appeared to be greater than that of chloramphenicol [56-75-7], but less than that of penicillin G [61-33-6] when assayed against strains susceptible to each of the drugs. The everninomicins were bacteriostatic for all strains tested, except group A streptococci. No facultatively anaerobic gram-neg. bacilli were susceptible. Resistant mutants were selected with difficulty from susceptible straphylococci in the lab. These showed no cross-resistance to available antimicrobial agents. Most variations in media, growth conditions, or procedure of assay had little or no effect on antimicrobial activity. Only addn.. of serum or increase in inoculum size reduced antibacterial activity. Differences in activity of the 2 components were encountered infrequently; the B component was 4-6-fold more active against gonococci and group A streptococci, and the D component was 4-fold more active against enterococci. Because of the high degree of in vitro activity and lack of resistance among susceptible genera of bacteria, the everninomicins clearly merit further careful study as potential therapeutic agents.
ST ***everninomicin*** bactericide
IT Antibiotics

(***everninomicin*** B and D as)
IT Bacteroides
Neisseria
Streptococcus
(***everninomicin*** inhibition of)
IT 56-75-7 61-33-6, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(bactericidal activity of, ***everninomicin*** in relation to)

L12 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1970:422397 CAPLUS
DOCUMENT NUMBER: 73:22397
TITLE: Everninomicins. Biosynthetic studies
AUTHOR(S): Sattler, Arnulf; Schaffner, Carl P.
CORPORATE SOURCE: Inst. of Microbiol., Rutgers State Univ., New Brunswick, NJ, USA
SOURCE: Journal of Antibiotics (1970), 23(4), 210-12
CODEN: JANTAJ; ISSN: 0021-8820
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Acetate, malonate, and glucose were good precursors of 4 ***everninomicin*** antibiotics produced by ***Micromonospora*** ***carbonacea*** var aurantiaca. Acetate and malonate were important for the synthesis of dichloroisoeverninic acid, an aromatic moiety common to the 4 everninomicins, thus indicating its relation to the biosynthesis of orsellinic acid. The Me group of methionine was incorporated into the methoxy group of dichloroisoeverninic acid. The remainder of the ***everninomicin*** mol. was apparently derived principally from glucose.
AB Acetate, malonate, and glucose were good precursors of 4 ***everninomicin*** antibiotics produced by ***Micromonospora*** ***carbonacea*** var aurantiaca. Acetate and malonate were important for the synthesis of dichloroisoeverninic acid, an aromatic moiety common to the 4 everninomicins, thus indicating its relation to the biosynthesis of orsellinic acid. The Me group of methionine was incorporated into the methoxy group of dichloroisoeverninic acid. The remainder of the ***everninomicin*** mol. was apparently derived principally from glucose.
IT ***Micromonospora***
(***carbonacea*** aurantiaca, everninomicins formation by)

L12 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1966:460460 CAPLUS
DOCUMENT NUMBER: 65:60460
ORIGINAL REFERENCE NO.: 65:11293e-f
TITLE: Purification and biological studies of ***everninomicin*** B
AUTHOR(S): Weinstein, Marvin J.; Wagman, Gerald H.; Oden, Edwin M.; Luedemann, George M.; Sloane, Paul; Murawski, Alphonse; Marquez, Joseph
CORPORATE SOURCE: Schering Corp., Bloomfield, NJ
SOURCE: Antimicrobial Agents and Chemotherapy (1961-70) (1965) 821-7
CODEN: AACHAX; ISSN: 0074-9923
DOCUMENT TYPE: Journal
LANGUAGE: English

AB ***Everninomicin*** complex (CA 65, 3356a) was extd. from a broth culture of ***Micromonospora*** ***carbonacea*** NRRL 2972 with EtOAc at pH 7; the evapd. ext., dissolved in Me2CO, was pptd. by addn. to a 5:1 mixt. of petroleum ether-Et2O (***everninomicin*** E stays in soln.). It was then chromatographed on a Florisil column (activated 16 hrs. at 105.degree.), ***everninomicin*** B (I) was eluted with 30% Me2CO in CH2Cl2. The dried fraction was dissolved in EtOAc, washed with H2O, and the Et2O-pptn. step was repeated. I is amorphous, unstable at pH 5 and below, and stable at pH 7-10 to a 30-min. boiling. The Na salt (H2O sol.) absorbs uv at .lambda.max. = 305 m.mu., E1%1 cm. = 84; I is active against gram-pos. organisms. The in vitro min. inhibitory concn. was 0.15-0.25 .gamma./ml. against Staphylococcus aureus. In vivo protection in mice against lethal strains of S. aureus and Streptococcus pyogenes was 2 mg./kg. (intraperitoneally). The L.D.50 in mice was: intravenously 875 mg./kg., intraperitoneally 1000 mg./kg., and subcutaneously 1750 mg./kg. I is 75% bound by serum.

TI Purification and biological studies of ***everninomicin*** B

AB ***Everninomicin*** complex (CA 65, 3356a) was extd. from a broth culture of ***Micromonospora*** ***carbonacea*** NRRL 2972 with EtOAc at pH 7; the evapd. ext., dissolved in Me2CO, was pptd. by addn. to a 5:1 mixt. of petroleum ether-Et2O (***everninomicin*** E stays in soln.). It was then chromatographed on a Florisil column (activated 16 hrs. at 105.degree.), ***everninomicin*** B (I) was eluted with 30% Me2CO in CH2Cl2. The dried fraction was dissolved in EtOAc, washed with H2O, and the Et2O-pptn. step was repeated. I is amorphous, unstable at pH 5 and below, and stable at pH 7-10 to a 30-min. boiling. The Na salt (H2O sol.) absorbs uv at .lambda.max. = 305 m.mu., E1%1 cm. = 84; I is active against gram-pos. organisms. The in vitro min. inhibitory concn. was 0.15-0.25 .gamma./ml. against Staphylococcus aureus. In vivo protection in mice against lethal strains of S. aureus and Streptococcus pyogenes was 2 mg./kg. (intraperitoneally). The L.D.50 in mice was: intravenously 875 mg./kg., intraperitoneally 1000 mg./kg., and subcutaneously 1750 mg./kg. I is 75% bound by serum.

IT ***Micromonospora*** ***carbonacea***
(***everninomicin*** B from)

IT Spectra, visible and ultraviolet
(of ***everninomicin*** B)

IT Everninomycin B
(from ***Micromonospora*** ***carbonacea***)

L12 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1965:433659 CAPLUS
DOCUMENT NUMBER: 63:33659
ORIGINAL REFERENCE NO.: 63:6047f-g
TITLE: Chemistry of antibiotics from Micromonospora. III. Isolation and characterization of ***everninomicin*** D and ***everninomicin*** B
AUTHOR(S): Herzog, H. L.; Meseck, E.; DeLorenzo, S.; Murawski, A.; Charney, W.; Rosselet, J. P.
CORPORATE SOURCE: Schering Corp., Bloomfield, NJ
SOURCE: Applied Microbiology (1965), 13(4), 515-20
CODEN: APMBAY; ISSN: 0003-6919
DOCUMENT TYPE: Journal
LANGUAGE: English
AB cf. CA 59, 8091e. The isolation of ***everninomicin*** D and ***everninomicin*** B, two closely related antibiotics produced by ***M*** . ***carbonacea*** , is described. The structures of

everninomicin D and B are shown to parallel closely that of curamycin, a polysaccharidic antibiotic with a low mol. wt. and a dichloroisoeverninic acid end group.

TI Chemistry of antibiotics from Micromonospora. III. Isolation and characterization of ***everninomicin*** D and ***everninomicin*** B

AB cf. CA 59, 8091e. The isolation of ***everninomicin*** D and ***everninomicin*** B, two closely related antibiotics produced by ***M*** . ***carbonacea*** , is described. The structures of ***everninomicin*** D and B are shown to parallel closely that of curamycin, a polysaccharidic antibiotic with a low mol. wt. and a dichloroisoeverninic acid end group.

IT ***Micromonospora*** ***carbonacea***
(***everninomicin*** B and D from)

IT Antibiotic substances
(everninomicins B and D as, from ***Micromonospora*** ***carbonacea***)

IT Everninomycin B
Everninomycin D
(from ***Micromonospora*** ***carbonacea***)

L12 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1965:426938 CAPLUS
DOCUMENT NUMBER: 63:26938
ORIGINAL REFERENCE NO.: 63:4830h,4831a
TITLE: Pharmacological properties of ***everninomicin*** D
AUTHOR(S): Black, Jack; Calesnick, Benjamin; Falco, Frank G.; Weinstein, Marvin J.
CORPORATE SOURCE: Schering Corp., Bloomfield, NJ
SOURCE: Antimicrobial Agents and Chemotherapy (1961-70) (1965), Volume Date 1964, (Oct.), 38-46
CODEN: AACHAX; ISSN: 0074-9923
DOCUMENT TYPE: Journal
LANGUAGE: English

AB ***Everninomicin*** D (I), a new antibiotic produced by ***Micromonospora*** ***carbonacea*** , has a comparable spectrum to penicillin G and is active against penicillin-resistant organisms. The L.D.50 of I in mice is 3750 mg./kg. by both the subcutaneous and intraperitoneal routes, and 125 mg./kg. intravenously. The P.D.50 (preventive dose) against Staphylococcus organisms is 2.5 mg./kg. and against Streptococcus organisms 1 mg./kg. Significant serum, urine, and bile levels in dogs were obtained after single and repeated intramuscular doses of I. A 2-week period of intramuscular administration of 2-10 mg./kg. in dogs and rats demonstrated some muscle irritation, but no systemic toxicity. Intravenous studies in animals demonstrated high levels in bile, blood, urine, and feces. Intramuscular tolerance, blood, and urinary levels were evaluated in 10 normal human subjects with doses up to 2 mg./kg. Erratic absorption was noted, and some local discomfort comparable to intramuscular tetracycline was reported. Oral administration gave no significant blood levels.

TI Pharmacological properties of ***everninomicin*** D

AB ***Everninomicin*** D (I), a new antibiotic produced by ***Micromonospora*** ***carbonacea*** , has a comparable spectrum to penicillin G and is active against penicillin-resistant organisms. The L.D.50 of I in mice is 3750 mg./kg. by both the subcutaneous and intraperitoneal routes, and 125 mg./kg. intravenously. The P.D.50

(preventive dose) against Staphylococcus organisms is 2.5 mg./kg. and against Streptococcus organisms 1 mg./kg. Significant serum, urine, and bile levels in dogs were obtained after single and repeated intramuscular doses of I. A 2-week period of intramuscular administration of 2-10 mg./kg. in dogs and rats demonstrated some muscle irritation, but no systemic toxicity. Intravenous studies in animals demonstrated high levels in bile, blood, urine, and feces. Intramuscular tolerance, blood, and urinary levels were evaluated in 10 normal human subjects with doses up to 2 mg./kg. Erratic absorption was noted, and some local discomfort comparable to intramuscular tetracycline was reported. Oral administration gave no significant blood levels.

IT Antibiotic substances
(***everninomicin*** D from ***Micromonospora***
carbonacea as)

IT ***Micromonospora*** ***carbonacea***
(***everninomicin*** from)

L12 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1965:420068 CAPLUS
DOCUMENT NUMBER: 63:20068
ORIGINAL REFERENCE NO.: 63:3578d-f
TITLE: Fermentation and isolation of ***everninomicin***
AUTHOR(S): Wagman, Gerald H.; Luedemann, George M.; Weinstein, Marvin J.
CORPORATE SOURCE: Schering Corp., Bloomfield, NJ
SOURCE: Antimicrobial Agents and Chemotherapy (1961-70) (1965), Volume Date 1964, (Oct.), 33-7
CODEN: AACHAX; ISSN: 0074-9923
DOCUMENT TYPE: Journal
LANGUAGE: English

AB ***Everninomicin*** is a solvent-extractable antibiotic complex active against gram-pos. organisms, which is produced by ***Micromonospora*** ***carbonacea*** (NRRL 2972). Fermentation conditions were studied, and isolation procedures are described for the antibiotic mixt. The relation between N and carbohydrate ratios in various media and cell growth and ***everninomicin*** production were detd. The complex, which consists of 5 components, was found only in the broth filtrate and not in the mycelium. After extn. of the broth with EtOAc and pptn. with petr. ether, the antibiotic mixt. was purified by use of a basic alumina column. The complex was neg. in ninhydrin, FeCl3, and starch-KI tests, and gave a pos. Molisch test. The components can be sepd. from each other by adsorption chromatography on Florisil. ***Everninomicin*** D, which has a higher sp. activity than the other antibiotics in the mixt., was isolated free from other materials.

TI Fermentation and isolation of ***everninomicin***

AB ***Everninomicin*** is a solvent-extractable antibiotic complex active against gram-pos. organisms, which is produced by ***Micromonospora*** ***carbonacea*** (NRRL 2972). Fermentation conditions were studied, and isolation procedures are described for the antibiotic mixt. The relation between N and carbohydrate ratios in various media and cell growth and ***everninomicin*** production were detd. The complex, which consists of 5 components, was found only in the broth filtrate and not in the mycelium. After extn. of the broth with EtOAc and pptn. with petr. ether, the antibiotic mixt. was purified by use of a basic alumina column. The complex was neg. in ninhydrin, FeCl3, and starch-KI tests, and gave a pos.

Molisch test. The components can be sepd. from each other by adsorption chromatography on Florisil. ***Everninomicin*** D, which has a higher sp. activity than the other antibiotics in the mixt., was isolated free from other materials.

IT Antibiotic substances
(***everninomicin*** as, from ***Micromonospora*** ***carbonacea***)

IT ***Micromonospora*** ***carbonacea***
(***everninomicin*** from)

IT Fermentation
(***everninomicin*** , by ***Micromonospora*** ***carbonacea***)

IT Everninomycin A
Everninomycin B
Everninomycin C
Everninomycin D
(from ***Micromonospora*** ***carbonacea*** , prepn. and properties of)

L12 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1965:418760 CAPLUS
DOCUMENT NUMBER: 63:18760
ORIGINAL REFERENCE NO.: 63:3356a-c
TITLE: ***Everninomicin*** , a new antibiotic complex from ***Micromonospora*** ***carbonacea***
AUTHOR(S): Weinstein, Marvin J.; Luedemann, George M.; Oden, Edwin M.; Wagman, Gerald H.
CORPORATE SOURCE: Schering Corp., Bloomfield, NJ
SOURCE: Antimicrobial Agents and Chemotherapy (1961-70) (1965), Volume Date 1964, (Oct.), 24-32
CODEN: AACHAX; ISSN: 0074-9923
DOCUMENT TYPE: Journal
LANGUAGE: English

AB ***Everninomicin*** , a complex of gram-pos. active antibiotics, is produced by a new species of Micromonospora, designated as ***M*** ***carbonacea*** (NRRL 2972). Paper chromatography of the mixt. indicated the presence of at least 5 active components identified as ***everninomicin*** A, B, C, D, and E. The ***everninomicin*** complex was extd. from the fermentation broth with org. solvents; the individual components could be resolved by partition chromatography. The major antibiotic component of the complex was named ***everninomicin*** D, because it contains dichloroisoeverninic acid. The antibiotic is highly active against gram-pos. bacteria, including strains resistant to other antibiotics. In vivo protection in mice was complete with the antibiotic administered by the subcutaneous route against lethal strains of Streptococcus pyogenes, Staphylococcus aureus, and Diplococcus pneumoniae. The acute L.D.50 in mice for ***everninomicin*** D is greater than 3750 mg./kg. subcutaneously and intraperitoneally, and is 125 mg./kg. intravenously.

TI ***Everninomicin*** , a new antibiotic complex from ***Micromonospora*** ***carbonacea***

AB ***Everninomicin*** , a complex of gram-pos. active antibiotics, is produced by a new species of Micromonospora, designated as ***M*** ***carbonacea*** (NRRL 2972). Paper chromatography of the mixt. indicated the presence of at least 5 active components identified as ***everninomicin*** A, B, C, D, and E. The ***everninomicin*** complex was extd. from the fermentation broth with org. solvents; the

individual components could be resolved by partition chromatography. The major antibiotic component of the complex was named ***everninomicin*** D, because it contains dichloroisoeverninic acid. The antibiotic is highly active against gram-pos. bacteria, including strains resistant to other antibiotics. In vivo protection in mice was complete with the antibiotic administered by the subcutaneous route against lethal strains of Streptococcus pyogenes, Staphylococcus aureus, and Diplococcus pneumoniae. The acute L.D.50 in mice for ***everninomicin*** D is greater than 3750 mg./kg. subcutaneously and intraperitoneally, and is 125 mg./kg. intravenously.

IT Antibiotic substances
(***everninomicin*** as, from ***Micromonospora*** ***carbonacea***)

IT ***Micromonospora*** ***carbonacea***
(***everninomicin*** from)

IT Everninomycin A
Everninomycin B
Everninomycin C
Everninomycin D
Everninomycin E
(from ***Micromonospora*** ***carbonacea***)

L12 ANSWER 19 OF 20 MEDLINE on STN
ACCESSION NUMBER: 65092563 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14287980
TITLE: ***MICROMONOSPORA*** ***CARBONACEA*** SP. N., AN ***EVERNINOMICIN*** -PRODUCING ORGANISM.
AUTHOR: LUEDEMANN G M; BRODSKY B
SOURCE: Antimicrobial agents and chemotherapy, (1964) 10 47-52.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: OLDMEDLINE
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 19990716
Last Updated on STN: 19990716
Entered Medline: 19961201

TI ***MICROMONOSPORA*** ***CARBONACEA*** SP. N., AN ***EVERNINOMICIN*** -PRODUCING ORGANISM.

L12 ANSWER 20 OF 20 MEDLINE on STN
ACCESSION NUMBER: 65092521 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14287938
TITLE: ***EVERNINOMICIN*** , A NEW ANTIBIOTIC COMPLEX FROM ***MICROMONOSPORA*** ***CARBONACEA*** .
AUTHOR: WEINSTEIN M J; LUEDEMANN G M; ODEN E M; WAGMAN G H
SOURCE: Antimicrobial agents and chemotherapy, (1964) 10 24-32.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: OLDMEDLINE
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 19990716
Last Updated on STN: 19990716
Entered Medline: 19961201

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TI      ***EVERNINOMICIN***  , A NEW ANTIBIOTIC COMPLEX FROM
        ***MICROMONOSPORA***      ***CARBONACEA***  .


=> d hist

     (FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:34:16 ON 01 JUL 2004
L1           352 S EVERNINOMICIN
L2             4 S L1 (3A) BIOSYNTHE?
L3             0 S L1 AND GENE (2A)PATH?
L4            20 S L1 AND GENE
L5          3135 S MICROMONOSPORA
L6            72 S MICROMONOSPORA CARBONACEA
L7          7464 S ACTINOMYCETE
L8           327 S L5 AND L7
L9            21 S M. CARBONACEA
L10           75 S L6 OR L9
L11           26 S L10 AND L1
L12           20 DUP REM L11 (6 DUPLICATES REMOVED)

=> dup rem l2
PROCESSING COMPLETED FOR L2
L13            4 DUP REM L2 (0 DUPLICATES REMOVED)

=> d ibib abs kwic total l13

L13  ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:570533  CAPLUS
DOCUMENT NUMBER:          139:96406
TITLE:                    High throughput method for discovery of gene clusters
                          associated with biosynthesis of microbial natural
                          products
INVENTOR(S):              Farnet, Chris M.; Staffa, Alfredo; Zazopoulos,
                          Emmanuel
PATENT ASSIGNEE(S):       Can.
SOURCE:                   U.S. Pat. Appl. Publ., 29 pp., Cont.-in-part of U.S.
                          Ser. No. 205,032.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   11
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     US 2003138810      A1   20030724       US 2002-232370   20020903
     US 2003054353      A1   20030320       US 2001-910813   20010724
     US 2002164747      A1   20021107       US 2001-976059   20011015
     US 2003171562      A1   20030911       US 2002-132134   20020426
     US 2003064491      A1   20030403       US 2002-152886   20020521
     US 2003077767      A1   20030424       US 2002-166087   20020611
     US 2003113874      A1   20030619       US 2002-205032   20020726
     US 2003198981      A1   20031023       US 2002-329079   20021224
     US 2003211567      A1   20031113       US 2002-329027   20021224
PRIORITY APPLN. INFO.:                  US 2000-239924P  P  20001013
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US 2001-286346P P 20010426
US 2001-291959P P 20010521
US 2001-296744P P 20010611
US 2001-910813 A2 20010724
US 2001-307629P P 20010726
US 2001-976059 A2 20011015
US 2001-334604P P 20011203
US 2001-342133P P 20011226
US 2002-372789P P 20020417
US 2002-132134 A2 20020426
US 2002-152886 A2 20020521
US 2002-166087 A2 20020611
US 2002-205032 A2 20020726
US 2001-283296P P 20010412
US 2002-232370 A2 20020903

AB A method for identifying gene cluster is disclosed. The method may be used for identifying gene clusters involved in the biosynthesis of natural products. A small insert library of DNA fragments of genomic DNA and a large insert library of DNA fragments of genomic DNA are prepd. Fragments in the small insert library are sequenced and compared by homol. comparison under computer control to a database contg. genes, gene fragments or proteins known to be involved in the biosynthesis of microbial natural products. Fragments having similar structure to genes, gene fragments or proteins known to be involved in the biosynthesis of naturally occurring metabolites are used as probes to screen the large insert library of genomic DNA to detect gene clusters involved in the biosynthesis of microbial natural products.

IT 11051-71-1P, Avilamycin 12794-10-4P, Benzodiazepine 53024-98-9P, ***Everninomicin*** 128808-89-9P, Orthosomycin
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(genes in ***biosynthesis*** of; high throughput method for discovery of gene clusters assocd. with biosynthesis of microbial natural products)

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:778209 CAPLUS
DOCUMENT NUMBER: 137:290031
TITLE: Gene and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures
INVENTOR(S): Farnet, Chris M.; Zazopoulos, Emmanuel; Staffa, Alfredo
PATENT ASSIGNEE(S): Ecopia Biosciences Inc., Can.
SOURCE: PCT Int. Appl., 511 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002079505	A2	20021010	WO 2002-CA432	20020328
WO 2002079505	A3	20031009		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1373309 A2 20040102 EP 2002-713968 20020328
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.: US 2001-279095P P 20010328
US 2001-279709P P 20010330
US 2001-285214P P 20010420
WO 2002-CA432 W 20020328

AB The invention provides compns. and methods useful to identify orthosomycin biosynthetic gene clusters. The invention also provides compns. and methods useful to distinguish everninomicin-type orthosomycin gene clusters and avilamycin-type orthosomycin gene clusters. Thus, gene and encoded open reading frame sequences are provided for ***everninomicin*** ***biosynthetic*** loci from Micromonospora carbonacea aurantiaca and M. carbonacea africana, and the avilamycin-type loci from Streptomyces mobaraensis. An orthosomycin gene cluster may be identified using compns. of the invention such as hybridization probes, PCR primers derived from specific protein families responsible for the unique structural features that distinguish orthosomycins, everninomicin-type orthosomycins and avilamycin-type orthosomycins. An orthosomycin gene cluster may be identified using compns. of the invention such as the sequence code for the ref. sequences stored on computer readable medium.
AB The invention provides compns. and methods useful to identify orthosomycin biosynthetic gene clusters. The invention also provides compns. and methods useful to distinguish everninomicin-type orthosomycin gene clusters and avilamycin-type orthosomycin gene clusters. Thus, gene and encoded open reading frame sequences are provided for ***everninomicin*** ***biosynthetic*** loci from Micromonospora carbonacea aurantiaca and M. carbonacea africana, and the avilamycin-type loci from Streptomyces mobaraensis. An orthosomycin gene cluster may be identified using compns. of the invention such as hybridization probes, PCR primers derived from specific protein families responsible for the unique structural features that distinguish orthosomycins, everninomicin-type orthosomycins and avilamycin-type orthosomycins. An orthosomycin gene cluster may be identified using compns. of the invention such as the sequence code for the ref. sequences stored on computer readable medium.
ST orthosomycin biosynthetic gene cluster sequence Micromonospora Streptomyces; ***everninomicin*** ***biosynthetic*** gene cluster sequence Micromonospora; avilamycin biosynthetic gene cluster sequence Streptomyces

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:565072 CAPLUS
DOCUMENT NUMBER: 135:148261
TITLE: The Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in the development of new antibiotics
INVENTOR(S): Staffa, Alfredo; Zazopoulos, Emmanuel; Mercure,

Stephane; Nowacki, Piotr
PATENT ASSIGNEE(S): Ecopia Biosciences Inc., Can.; Farnet, Chris
SOURCE: PCT Int. Appl., 177 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001055180	A2	20010802	WO 2001-CA128	20010129
WO 2001055180	A3	20020110		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1252316	A2	20021030	EP 2001-903544	20010129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-177711P P 20000127
WO 2001-CA128 W 20010129

AB The present invention relates to isolated genetic sequences encoding proteins which direct the ***biosynthesis*** of the antibiotic ***everninomicin*** in Micromonospora carbonacea. The isolated biosynthetic gene cluster serves as a substrate for bioengineering of antibiotic structures.

TI The Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in the development of new antibiotics

AB The present invention relates to isolated genetic sequences encoding proteins which direct the ***biosynthesis*** of the antibiotic ***everninomicin*** in Micromonospora carbonacea. The isolated biosynthetic gene cluster serves as a substrate for bioengineering of antibiotic structures.

ST Micromonospora ***everninomicin*** ***biosynthesis*** gene cluster sequence; antibiotic design ***everninomicin*** ***biosynthesis*** gene cluster sequence

IT Micromonospora carbonacea
(Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(ORF, of ***everninomicin*** ***biosynthesis*** gene cluster; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT Drug design

(of antibiotic everninomicin derivs.; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT Genetic engineering
(of antibiotic synthesis; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT DNA sequences
(of ***everninomicin*** ***biosynthesis*** gene cluster of Micromonospora carbonacea; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT Protein sequences
(of open reading frames of ***everninomicin*** ***biosynthesis*** gene cluster of Micromonospora carbonacea; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT Gene
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(open reading frame, of ***everninomicin*** ***biosynthesis*** gene cluster; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT Genetic polymorphism
(single nucleotide, in ***everninomicin*** ***biosynthesis*** gene cluster; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT 53024-98-9D, Everninomicin, analogs, derivs.
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT 352404-35-4 352404-38-7 352404-39-8 352404-40-1 352404-42-3
352404-43-4 352404-44-5 352404-45-6 352404-46-7 352404-47-8
352404-48-9 352404-49-0 352404-50-3 352404-51-4 352404-52-5
352404-53-6 352404-54-7 352404-56-9 352404-57-0 352404-58-1
352404-59-2 352404-60-5 352404-61-6 352404-62-7 352404-63-8
352404-64-9 352404-65-0 352404-66-1 352404-67-2 352404-68-3
352404-70-7 352404-71-8 352404-72-9 352404-73-0 352404-74-1
352404-75-2 352404-76-3 352404-77-4 352404-78-5 352404-80-9
352404-82-1 352404-83-2 352404-84-3 352404-85-4 352404-86-5
352404-87-6 352404-88-7 352404-89-8 352404-90-1 352434-69-6
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(amino acid sequence; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

IT 352404-34-3 352404-36-5 352404-37-6 352404-41-2 352404-55-8
352404-69-4 352404-79-6 352404-81-0
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological

study); USES (Uses)
(nucleotide sequence; Micromonospora carbonacea gene cluster responsible for ***everninomicin*** ***biosynthesis*** and its use in development of new antibiotics)

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:526200 CAPLUS
DOCUMENT NUMBER: 135:133123
TITLE: ***Everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea
INVENTOR(S): Hosted, Thomas J.; Horan, Ann C.; Wang, Tim X.
PATENT ASSIGNEE(S): Schering Corporation, USA
SOURCE: PCT Int. Appl., 109 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051639	A2	20010719	WO 2001-US1187	20010112
WO 2001051639	A3	20020228		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2004101832	A1	20040527	US 2001-758759	20010111

PRIORITY APPLN. INFO.: US 2000-175751P P 20000112

AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin everninomicin and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the everninomicin structure. The DNA sequence for the gene clusters responsible for encoding ***everninomicin*** ***biosynthetic*** genes, which provide the machinery for producing everninomicin, are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel everninomicin related compds. based on everninomicin, arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in everninomicin. A Micromonospora site-specific integrase gene is also provided, which can be incorporated in a vector for integration into any actinomycete, and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an actinomycete chromosome using this particular vector.

TI ***Everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea

AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin everninomicin and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the everninomicin structure. The DNA sequence for the gene clusters responsible for encoding ***everninomicin*** ***biosynthetic*** genes, which provide the machinery for producing everninomicin, are provided. Thus, this invention provides the nucleic

acid sequences needed to synthesize novel everninomicin related compds. based on everninomicin, arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in everninomicin. A Micromonospora site-specific integrase gene is also provided, which can be incorporated in a vector for integration into any actinomycete, and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an actinomycete chromosome using this particular vector.

ST sequence gene ***everninomicin*** ***biosynthesis*** Micromonospora; integrase gene sequence Micromonospora

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrW; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrX; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrY; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrZ; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsA; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsB; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsC; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(heat stress, homol.; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Flavoproteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST

(Analytical study); BIOL (Biological study); PREP (Preparation)
(hydrogen ion-sodium-exchanging; ***everninomicin***
biosynthetic genes in Micromonospora carbonacea)

IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(membrane; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(multidrug; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf10; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf11; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf1; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf2; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf3; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf4; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf5; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf6; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf7; ***everninomicin*** ***biosynthetic*** genes in

Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf8; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf9; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Enzymes, analysis
RL: ANT (Analyte); ANST (Analytical study)
(tailoring; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT Transcription factors
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(.sigma.; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 351394-42-8P 351394-43-9P 351394-44-0P 351394-46-2P 351394-47-3P
351394-48-4P 351394-49-5P 351394-50-8P 351394-51-9P 351394-52-0P
351394-53-1P 351394-54-2P 351394-55-3P 351394-56-4P 351394-57-5P
351394-58-6P 351394-59-7P 351394-60-0P 351394-61-1P 351394-62-2P
351394-63-3P 351394-64-4P 351394-65-5P 351394-66-6P 351394-67-7P
351394-68-8P 351394-69-9P 351394-70-2P 351394-71-3P 351394-72-4P
351394-73-5P 351394-74-6P 351394-75-7P 351394-76-8P 351394-77-9P
351394-78-0P 351394-79-1P 351394-80-4P 351394-81-5P 351394-82-6P
351394-83-7P 351394-84-8P 351394-85-9P 351394-86-0P 351394-87-1P
351394-88-2P 351394-89-3P 351394-90-6P 351394-91-7P 351394-92-8P
351394-93-9P 351394-94-0P 351394-95-1P 351394-96-2P 351394-97-3P
351394-98-4P 351394-99-5P 351395-00-1P 351395-01-2P 351395-02-3P
351395-03-4P 351395-04-5P 351395-05-6P 351395-06-7P 351395-07-8P
351395-08-9P 351395-09-0P 351395-10-3P 351395-11-4P 351395-12-5P
351395-13-6P 351395-14-7P 351395-15-8P 351395-16-9P 351395-17-0P
351395-18-1P 351395-19-2P 351395-20-5P 351395-21-6P 351395-22-7P
351395-23-8P 351395-24-9P 351395-25-0P 351395-26-1P 351395-27-2P
351395-29-4P 351395-30-7P 351395-31-8P 351395-32-9P 351395-33-0P
351395-34-1P 351395-35-2P 351395-36-3P 351395-37-4P 351395-38-5P
351395-39-6P 351395-40-9P 351395-41-0P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 480-64-8P, orsellinic acid
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(***biosynthesis*** ; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 9033-07-2, glycosyltransferase
RL: ANT (Analyte); ANST (Analytical study)
(***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 9001-18-7P, lipoamide dehydrogenase 9001-40-5P, Dehydrogenase, glucose-6-phosphate 9001-63-2P, Lysozyme 9001-92-7P, Protease 9012-30-0P, acetyltransferase 9015-72-9P, Dehalogenase 9023-90-9P,

Methylmalonyl-CoA mutase 9023-94-3P, propionyl-CoA carboxylase 9026-03-3P, DTDP-glucose synthetase 9026-39-5P, Uridine kinase 9026-43-1P, Serine threonine kinase 9026-97-5P, Deoxyribose-phosphate aldolase 9027-41-2P, Hydrolase 9028-86-8P, Aldehyde dehydrogenase 9028-93-7P, IMP dehydrogenase 9030-24-4P, uracil phosphoribosyltransferase 9031-09-8P, Phosphotransferase 9031-96-3P, peptidase 9033-25-4P, methyl transferase 9035-73-8P, Oxidase 9045-37-8P, 6-Methylsalicylate synthetase 37211-59-9P, GDP-mannose 4,6-dehydratase 37259-54-4P, DTDP-glucose dehydratase 39369-30-7P, rRNA methyltransferase 52350-85-3P, integrase 59536-73-1P, Phosphomannomutase 67340-07-2P, Acyl-CoA carboxylase 121684-25-1P, Orsellinic acid synthase 128964-89-6P, cytochrome D oxidase 259093-18-0P, Epimerase, thymidine diphosphoglucose
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 53024-98-9P, ***everninomicin***
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 9031-66-7P, Aminotransferase 9044-86-4P, Dehydratase 9055-15-6P, Oxidoreductase 37342-00-0P, Epimerase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hexose; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 9035-51-2P, P450, properties 9046-59-7P, Hydroxylase 9055-20-3P, Chloroperoxidase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 9028-06-2P, L-Proline-4-hydroxylase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homolog; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 351395-28-3P 351395-42-1P 351540-05-1P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(nucleotide sequence; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 351396-41-3 351396-42-4 351396-43-5 351396-44-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; ***everninomicin*** ***biosynthetic*** genes in Micromonospora carbonacea)

IT 351396-45-7 351396-46-8 351396-47-9 351396-48-0 351396-49-1
RL: PRP (Properties)
(unclaimed sequence; ***everninomicin*** ***biosynthetic*** genes in M

SYSTEM LIMITS EXCEEDED

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     (FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:34:16 ON 01 JUL 2004
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L2             4 S L1 (3A) BIOSYNTHE?
L3             0 S L1 AND GENE (2A)PATH?
L4            20 S L1 AND GENE
L5          3135 S MICROMONOSPORA
L6            72 S MICROMONOSPORA CARBONACEA
L7          7464 S ACTINOMYCETE
L8           327 S L5 AND L7
L9            21 S M. CARBONACEA
L10           75 S L6 OR L9
L11           26 S L10 AND L1
L12           20 DUP REM L11 (6 DUPLICATES REMOVED)
L13            4 DUP REM L2 (0 DUPLICATES REMOVED)

=> dup rem l4
PROCESSING COMPLETED FOR L4
L14           16 DUP REM L4 (4 DUPLICATES REMOVED)

=> d ibib abs kwic total l14

L14  ANSWER 1 OF 16  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:570533  CAPLUS
DOCUMENT NUMBER:          139:96406
TITLE:                    High throughput method for discovery of   ***gene***
                          clusters associated with biosynthesis of microbial
                          natural products
INVENTOR(S):              Farnet, Chris M.; Staffa, Alfredo; Zazopoulos,
                          Emmanuel
PATENT ASSIGNEE(S):       Can.
SOURCE:                   U.S. Pat. Appl. Publ., 29 pp., Cont.-in-part of U.S.
                          Ser. No. 205,032.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   11
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     ---------------   ----  --------      ---------------   --------
     US 2003138810     A1    20030724      US 2002-232370    20020903
     US 2003054353     A1    20030320      US 2001-910813    20010724
     US 2002164747     A1    20021107      US 2001-976059    20011015
     US 2003171562     A1    20030911      US 2002-132134    20020426
     US 2003064491     A1    20030403      US 2002-152886    20020521
     US 2003077767     A1    20030424      US 2002-166087    20020611
     US 2003113874     A1    20030619      US 2002-205032    20020726
     US 2003198981     A1    20031023      US 2002-329079    20021224
     US 2003211567     A1    20031113      US 2002-329027    20021224
PRIORITY APPLN. INFO.:                     US 2000-239924P   P 20001013
                                           US 2001-286346P   P 20010426
                                           US 2001-291959P   P 20010521
                                           US 2001-296744P   P 20010611
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US 2001-910813	A2	20010724
US 2001-307629P	P	20010726
US 2001-976059	A2	20011015
US 2001-334604P	P	20011203
US 2001-342133P	P	20011226
US 2002-372789P	P	20020417
US 2002-132134	A2	20020426
US 2002-152886	A2	20020521
US 2002-166087	A2	20020611
US 2002-205032	A2	20020726
US 2001-283296P	P	20010412
US 2002-232370	A2	20020903

AB A method for identifying ***gene*** cluster is disclosed. The method may be used for identifying ***gene*** clusters involved in the biosynthesis of natural products. A small insert library of DNA fragments of genomic DNA and a large insert library of DNA fragments of genomic DNA are prepd. Fragments in the small insert library are sequenced and compared by homol. comparison under computer control to a database contg. genes, ***gene*** fragments or proteins known to be involved in the biosynthesis of microbial natural products. Fragments having similar structure to genes, ***gene*** fragments or proteins known to be involved in the biosynthesis of naturally occurring metabolites are used as probes to screen the large insert library of genomic DNA to detect ***gene*** clusters involved in the biosynthesis of microbial natural products.

TI High throughput method for discovery of ***gene*** clusters associated with biosynthesis of microbial natural products

AB A method for identifying ***gene*** cluster is disclosed. The method may be used for identifying ***gene*** clusters involved in the biosynthesis of natural products. A small insert library of DNA fragments of genomic DNA and a large insert library of DNA fragments of genomic DNA are prepd. Fragments in the small insert library are sequenced and compared by homol. comparison under computer control to a database contg. genes, ***gene*** fragments or proteins known to be involved in the biosynthesis of microbial natural products. Fragments having similar structure to genes, ***gene*** fragments or proteins known to be involved in the biosynthesis of naturally occurring metabolites are used as probes to screen the large insert library of genomic DNA to detect ***gene*** clusters involved in the biosynthesis of microbial natural products.

ST hight throughput screening microbe genome database; biosynthesis microbe natural product ***gene*** cluster discovery

IT Lipopeptides
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(acidic, genes in biosynthesis of; high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Chemistry
(chem. compds., degrdn. genes; high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Genetic methods
(***gene*** discovery; high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Drug resistance

(***gene*** ; high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Enediynes
Macrolides
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(genes in biosynthesis of; high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Actinomadura
Actinoplanes
Amycolatopsis
Chromosome
Computer application
Databases
Genome
Geodermatophilus
High throughput screening
Kitasatospora
Kutzneria
Microbispora
Micromonospora
Microorganism
Myxococcus
Nocardia
Nocardioides
Nucleic acid hybridization
Nucleic acid library
Polyangium
Prokaryote
Saccharomonospora
Saccharopolyspora
Saccharothrix
Stigmatella
Streptomyces
Streptosporangium
(high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT ***Gene*** , microbial
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Natural products
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT Genetic element
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(pathogenicity island, detection of; high throughput method for

discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT 11051-71-1P, Avilamycin 12794-10-4P, Benzodiazepine 53024-98-9P, ***Everninomicin*** 128808-89-9P, Orthosomycin
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(genes in biosynthesis of; high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

IT 79956-01-7, Polyketide synthase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type I, modular, genes for; high throughput method for discovery of ***gene*** clusters assocd. with biosynthesis of microbial natural products)

L14 ANSWER 2 OF 16 EMBASE
on STN

ACCESSION NUMBER: 2003499435 EMBASE
TITLE: The occurrence and transferability of the resistance determinants in 50 amikacin-resistant Enterococcus faecalis and Enterococcus faecium.
AUTHOR: Bujdakova H.; Krupova I.; Filipova M.; Benczeova S.; Kettner M.; Drahovska H.; Seman M.; Bagova M.A.
CORPORATE SOURCE: H. Bujdakova, Dept. of Microbiology and Virology, Faculty of Natural Sciences, Comenius University, Mlynska dolina B-2, 842 15 Bratislava, Slovakia. bujdakova@fns.uniba.sk
SOURCE: International Journal of Antimicrobial Agents, (2003) 22/6 (632-633).
Refs: 12
ISSN: 0924-8579 CODEN: IAAGEA
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Letter
FILE SEGMENT: 004 Microbiology
037 Drug Literature Index
LANGUAGE: English
CT Medical Descriptors:
*antibiotic resistance
Enterococcus faecalis
Enterococcus faecium
bacterium isolate
antibiotic sensitivity
bacterial gene
minimum inhibitory concentration
gene mapping
human
letter
priority journal
*amikacin
ampicillin
gentamicin
streptomycin
vancomycin
everninomicin
dalfopristin plus quinupristin
chloramphenicol

RN (amikacin) 37517-28-5, 39831-55-5; (ampicillin) 69-52-3, 69-53-4, 7177-48-2, 74083-13-9, 94586-58-0; (gentamicin) 1392-48-9, 1403-66-3,

1405-41-0; (streptomycin) 57-92-1; (vancomycin) 1404-90-6, 1404-93-9; (***everninomicin***) 53024-98-9; (dalfopristin plus quinupristin) 126602-89-9; (chloramphenicol) 134-90-7, 2787-09-9, 56-75-7

L14 ANSWER 3 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2003437948 EMBASE

TITLE: Occurrence and spread of antibiotic resistances in Enterococcus faecium.

AUTHOR: Klare I.; Konstabel C.; Badstubner D.; Werner G.; Witte W.

CORPORATE SOURCE: I. Klare, Robert Koch Institute, Wernigerode Branch, Burgstrasse 37, D-38855 Wernigerode, Germany. i.klare@rki.de

SOURCE: International Journal of Food Microbiology, (1 Dec 2003) 88/2-3 (269-290).
Refs: 184
ISSN: 0168-1605 CODEN: IJFMDD

COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Conference Article

FILE SEGMENT: 004 Microbiology
017 Public Health, Social Medicine and Epidemiology
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Enterococci are the second to third most important bacterial genus in hospital infections. Especially Enterococcus (E.) faecium possesses a broad spectrum of natural and acquired antibiotic resistances which are presented in detail in this paper. From medical point of view, the transferable resistances to glycopeptides (e.g., vancomycin, VAN, or teicoplanin, TPL) and streptogramins (e.g., quinupristin/dalfopristin, Q/D) in enterococci are of special interest. The VanA type of enterococcal glycopeptide resistance is the most important one (VAN-r, TPL-r); its main reservoir is E. faecium. Glycopeptide-resistant E. faecium (GREF) can be found in hospitals and outside of them, namely in European commercial animal husbandry in which the glycopeptide avoparcin (AVO) was used as growth promoter in the past. There are identical types of the vanA ***gene*** clusters in enterococci from different ecological origins (faecal samples of animals, animal feed, patients in hospitals, persons in the community, waste water samples). Obviously, across the food chain (by GREF-contaminated meat products), these multiple-resistant bacteria or their vanA ***gene*** clusters can reach humans. In hospital infections, widespread epidemic-virulent E. faecium isolates of the same clone with or without glycopeptide resistance can occur; these strains often harbour different plasmids and the esp ***gene*** . This indicates that hospital-adapted epidemic-virulent E. faecium strains have picked up the vanA ***gene*** cluster after they were already widely spread. The streptogramin virginiamycin was also used as feed additive in commercial animal husbandry in Europe for more than 20 years, and it created reservoirs for streptogramin-resistant E. faecium (SREF). In 1998/1999, SREF could be isolated in Germany from waste water of sewage treatment plants, from faecal samples and meat products of animals that were fed virginiamycin (cross resistance to Q/D), from stools of humans in the community, and from clinical samples. These isolations of SREF occurred in a time before the streptogramin combination Q/D was introduced for therapeutic purposes in German hospitals in May 2000, while other streptogramins were not used in German clinics. This seems to indicate that the origin of these SREF or their streptogramin resistance

gene (s) originated from other sources outside the hospitals, probably from commercial animal husbandry. In order to prevent the dissemination of multiple antibiotic-resistant enterococci or their transferable resistance genes, a prudent use of antibiotics is necessary in human and veterinary medicine, and in animal husbandry.

AB . . . which the glycopeptide avoparcin (AVO) was used as growth promoter in the past. There are identical types of the vanA ***gene*** clusters in enterococci from different ecological origins (faecal samples of animals, animal feed, patients in hospitals, persons in the community, waste water samples). Obviously, across the food chain (by GREF-contaminated meat products), these multiple-resistant bacteria or their vanA ***gene*** clusters can reach humans. In hospital infections, widespread epidemic-virulent E. faecium isolates of the same clone with or without glycopeptide resistance can occur; these strains often harbour different plasmids and the esp ***gene*** . This indicates that hospital-adapted epidemic-virulent E. faecium strains have picked up the vanA ***gene*** cluster after they were already widely spread. The streptogramin virginiamycin was also used as feed additive in commercial animal husbandry. . . were not used in German clinics. This seems to indicate that the origin of these SREF or their streptogramin resistance ***gene*** (s) originated from other sources outside the hospitals, probably from commercial animal husbandry. In order to prevent the dissemination of multiple. . .

CT Medical Descriptors:
*antibiotic resistance
*Enterococcus faecium
*hospital infection: ET, etiology
*hospital infection: PC, prevention
Gram positive bacterium
bacterial strain
hospital
animal husbandry
    gene cluster
    bacterial gene
animal food
feces
waste water
meat
bacterium contamination
bacterial transmission
disease transmission
plasmid
bacterium isolate
    gene expression
    gene function
antibiotic therapy
human
nonhuman
conference paper
*vancomycin: PD, pharmacology
*teicoplanin: PD, pharmacology
*quinupristin: PD, pharmacology
*dalfopristin: PD, pharmacology
glycopeptide: PD, pharmacology
streptogramin: PD, pharmacology
avoparcin: PD, pharmacology

virginiamycin: PD, pharmacology
penicillin. . . pharmacology
polymyxin: PD, pharmacology
monobactam derivative: PD, pharmacology
ampicillin: PD, pharmacology
macrolide: PD, pharmacology
chloramphenicol: PD, pharmacology
tetracycline derivative: PD, pharmacology
quinolone derivative: PD, pharmacology
oxazolidine derivative: PD, pharmacology
everninomicin: PD, pharmacology
food additive
RN. . . (oxacillin) 1173-88-2, 66-79-5, 7240-38-2; (lincosamide) 80738-43-8; (polymyxin) 11081-39-3, 1406-11-7, 52580-78-6; (ampicillin) 69-52-3, 69-53-4, 7177-48-2, 74083-13-9, 94586-58-0; (chloramphenicol) 134-90-7, 2787-09-9, 56-75-7; (***everninomicin***) 53024-98-9

L14 ANSWER 4 OF 16 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2003:220453 BIOSIS
DOCUMENT NUMBER: PREV200300220453
TITLE: Genomic markers of nephrotoxicity in female cynomolgus monkeys.
AUTHOR(S): Davis, J. W. [Reprint Author]; Goodsaid, F. M. [Reprint Author]; Bral, C. M. [Reprint Author]; Mandakas, G. [Reprint Author]; Obert, L. A. [Reprint Author]; Garner, C. E. [Reprint Author]; Smith, R. J. [Reprint Author]; Rosenblum, I. Y. [Reprint Author]
CORPORATE SOURCE: Schering-Plough Research Institute, Lafayette, NJ, USA
SOURCE: Toxicological Sciences, (March 2003) Vol. 72, No. S-1, pp. 61. print.
Meeting Info.: 42nd Annual Meeting of the Society of Toxicology. Salt Lake City, Utah, USA. March 09-13, 2003. Society of Toxicology.
ISSN: 1096-6080 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 7 May 2003
Last Updated on STN: 7 May 2003

IT . . .
kidney: excretory system
IT Diseases
renal tubular necrosis: urologic disease, drug-induced
IT Chemicals & Biochemicals
MMP-9 [matrix metalloproteinase-9]; c-jun; c-myc; ***everninomicin*** : antiinfective-drug, nephrotoxicity; gentamicin: antibacterial-drug, antiinfective-drug, nephrotoxicity
IT Methods & Equipment
quantitative RT-PCR [quantitative reverse transcriptase-polymerase chain reaction]: genetic techniques, laboratory techniques
IT Miscellaneous Descriptors
gene expression; nephrotoxicity: genetic markers
RN 146480-36-6 (MMP-9)
146480-36-6 (matrix metalloproteinase-9)
53024-98-9 (***everninomicin***)
1403-66-3 (gentamicin)

L14 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:778209 CAPLUS
DOCUMENT NUMBER: 137:290031
TITLE: ***Gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures
INVENTOR(S): Farnet, Chris M.; Zazopoulos, Emmanuel; Staffa, Alfredo
PATENT ASSIGNEE(S): Ecopia Biosciences Inc., Can.
SOURCE: PCT Int. Appl., 511 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002079505	A2	20021010	WO 2002-CA432	20020328
WO 2002079505	A3	20031009		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1373309	A2	20040102	EP 2002-713968	20020328
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:
US 2001-279095P P 20010328
US 2001-279709P P 20010330
US 2001-285214P P 20010420
WO 2002-CA432 W 20020328

AB The invention provides compns. and methods useful to identify orthosomycin biosynthetic ***gene*** clusters. The invention also provides compns. and methods useful to distinguish ***everninomicin*** -type orthosomycin ***gene*** clusters and avilamycin-type orthosomycin ***gene*** clusters. Thus, ***gene*** and encoded open reading frame sequences are provided for ***everninomicin*** biosynthetic loci from Micromonospora carbonacea aurantiaca and M. carbonacea africana, and the avilamycin-type loci from Streptomyces mobaraensis. An orthosomycin ***gene*** cluster may be identified using compns. of the invention such as hybridization probes, PCR primers derived from specific protein families responsible for the unique structural features that distinguish orthosomycins, ***everninomicin*** -type orthosomycins and avilamycin-type orthosomycins. An orthosomycin ***gene*** cluster may be identified using compns. of the invention such as the sequence code for the ref. sequences stored on computer readable medium.

TI ***Gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures

AB The invention provides compns. and methods useful to identify orthosomycin biosynthetic ***gene*** clusters. The invention also provides compns.

and methods useful to distinguish ***everninomicin*** -type orthosomycin ***gene*** clusters and avilamycin-type orthosomycin ***gene*** clusters. Thus, ***gene*** and encoded open reading frame sequences are provided for ***everninomicin*** biosynthetic loci from Micromonospora carbonacea aurantiaca and M. carbonacea africana, and the avilamycin-type loci from Streptomyces mobaraensis. An orthosomycin ***gene*** cluster may be identified using compns. of the invention such as hybridization probes, PCR primers derived from specific protein families responsible for the unique structural features that distinguish orthosomycins, ***everninomicin*** -type orthosomycins and avilamycin-type orthosomycins. An orthosomycin ***gene*** cluster may be identified using compns. of the invention such as the sequence code for the ref. sequences stored on computer readable medium.

ST orthosomycin biosynthetic ***gene*** cluster sequence Micromonospora Streptomyces; ***everninomicin*** biosynthetic ***gene*** cluster sequence Micromonospora; avilamycin biosynthetic ***gene*** cluster sequence Streptomyces

IT Computer application
(computer-readable medium; ***gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

IT Protein sequences
(encoded by orthosomycin biosynthetic ***gene*** clusters in Micromonospora and Streptomyces species)

IT Micromonospora carbonacea africana
Micromonospora carbonacea aurantiaca
Microorganism
Nucleic acid hybridization
PCR (polymerase chain reaction)
Streptomyces mobaraensis
(***gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

IT Enzymes, biological studies
Gene , microbial
RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study)
(***gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

IT Primers (nucleic acid)
Probes (nucleic acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(***gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

IT DNA sequences
(of orthosomycin biosynthetic ***gene*** clusters in Micromonospora and Streptomyces species)

IT 467509-42-8 467509-44-0 467509-46-2 467509-48-4 467509-50-8
467509-52-0 467509-54-2 467509-56-4 467509-58-6 467509-60-0
467509-62-2 467509-64-4 467509-66-6 467509-68-8 467509-70-2
467509-72-4 467509-74-6 467509-76-8 467509-78-0 467509-80-4
467509-82-6 467509-84-8 467509-86-0 467509-88-2 467509-90-6
467509-92-8 467509-94-0 467509-96-2 467509-98-4 467510-00-5
467510-02-7 467510-04-9 467510-06-1 467510-08-3 467510-10-7
467510-12-9 467510-14-1 467510-16-3 467510-18-5 467510-20-9
467510-22-1 467510-24-3 467510-26-5 467510-28-7 467510-30-1

467510-32-3 467510-34-5 467510-36-7 467510-38-9 467510-40-3
467510-42-5 467510-44-7 467510-46-9 467510-48-1 467510-50-5
467510-52-7 467510-54-9 467510-56-1 467510-58-3 467510-60-7
467510-62-9 467510-64-1 467510-66-3 467510-68-5 467510-70-9
467510-72-1 467510-74-3 467510-76-5 467510-78-7 467510-80-1
467510-82-3 467510-84-5 467510-86-7 467510-88-9 467510-90-3
467510-92-5 467510-94-7 467510-96-9 467510-98-1 467511-00-8
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467511-32-6 467511-34-8 467511-36-0 467511-38-2 467511-40-6
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467511-52-0 467511-54-2 467511-56-4 467511-58-6 467511-60-0
467511-62-2 467511-64-4 467511-66-6 467511-68-8 467511-70-2
467511-72-4 467511-74-6 467511-76-8 467511-78-0 467511-80-4
467511-82-6 467511-84-8 467511-86-0 467511-88-2 467511-90-6
467511-92-8 467511-94-0 467511-96-2 467511-98-4 467512-00-1
467512-02-3 467512-04-5 467512-06-7 467512-08-9 467512-10-3
467512-18-1 467512-20-5 467512-22-7
RL: ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence; ***gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

IT 11051-71-1, Avilamycin 53024-98-9, ***Everninomicin***
128808-89-9, Orthosomycin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(***gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

IT 467509-43-9 467509-45-1 467509-47-3 467509-49-5 467509-51-9
467509-53-1 467509-55-3 467509-57-5 467509-59-7 467509-61-1
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467509-73-5 467509-75-7 467509-77-9 467509-79-1 467509-81-5
467509-83-7 467509-85-9 467509-87-1 467509-89-3 467509-91-7
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467510-23-2 467510-25-4 467510-27-6 467510-29-8 467510-31-2
467510-33-4 467510-35-6 467510-37-8 467510-39-0 467510-41-4
467510-43-6 467510-45-8 467510-47-0 467510-49-2 467510-51-6
467510-53-8 467510-55-0 467510-57-2 467510-59-4 467510-61-8
467510-63-0 467510-65-2 467510-67-4 467510-69-6 467510-71-0
467510-73-2 467510-75-4 467510-77-6 467510-79-8 467510-81-2
467510-83-4 467510-85-6 467510-87-8 467510-89-0 467510-91-4
467510-93-6 467510-95-8 467510-97-0 467510-99-2 467511-01-9
467511-03-1 467511-05-3 467511-07-5 467511-09-7 467511-11-1
467511-13-3 467511-15-5 467511-17-7 467511-19-9 467511-21-3
467511-23-5 467511-25-7 467511-27-9 467511-29-1 467511-31-5
467511-33-7 467511-35-9 467511-37-1 467511-39-3 467511-41-7
467511-43-9 467511-45-1 467511-47-3 467511-49-5 467511-51-9
467511-53-1 467511-55-3 467511-57-5 467511-59-7 467511-61-1
467511-63-3 467511-65-5 467511-67-7 467511-69-9 467511-71-3
467511-73-5 467511-75-7 467511-77-9 467511-79-1 467511-81-5
467511-83-7 467511-85-9 467511-87-1 467511-89-3 467511-91-7
467511-93-9 467511-95-1 467511-97-3 467511-99-5 467512-01-2
467512-03-4 467512-05-6 467512-07-8 467512-09-0 467512-11-4

467512-12-5 467512-13-6 467512-14-7 467512-15-8 467512-16-9
467512-17-0 467512-19-2 467512-21-6 467512-23-8
RL: ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleotide sequence; ***gene*** and protein sequences for identifying and distinguishing orthosomycin biosynthetic loci in microbial cultures)

L14 ANSWER 6 OF 16 MEDLINE on STN
ACCESSION NUMBER: 2002426147 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12183279
TITLE: Incidence of high-level evernimicin resistance in Enterococcus faecium among food animals and humans.
AUTHOR: Aarestrup Frank Moller; McNicholas Paul M
CORPORATE SOURCE: Danish Veterinary Institute, DK-1790 Copenhagen V, Denmark.. faa@vetinst.dk
SOURCE: Antimicrobial agents and chemotherapy, (2002 Sep) 46 (9) 3088-90.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200302
ENTRY DATE: Entered STN: 20020817
Last Updated on STN: 20030214
Entered Medline: 20030213
AB Six high-level evernimicin-resistant Enterococcus faecium isolates were identified among 304 avilamycin-resistant E. faecium isolates from animals and 404 stool samples from humans with diarrhea. All four animal isolates, and one of the human isolates, were able to transfer resistance to a susceptible E. faecium strain. The resulting transconjugants all tested positive for the presence of emtA, a ***gene*** encoding a methyltransferase previously linked with high-level evernimicin resistance. The four transconjugants derived from animal isolates all carried the same plasmid, while a differently sized plasmid was found in the isolate from humans. This study demonstrated a low incidence of high-level evernimicin resistance mediated by the emtA ***gene*** in different E. faecium isolates of animal and human origin.
AB . . . transfer resistance to a susceptible E. faecium strain. The resulting transconjugants all tested positive for the presence of emtA, a ***gene*** encoding a methyltransferase previously linked with high-level evernimicin resistance. The four transconjugants derived from animal isolates all carried the same. . . found in the isolate from humans. This study demonstrated a low incidence of high-level evernimicin resistance mediated by the emtA ***gene*** in different E. faecium isolates of animal and human origin.
RN 11051-71-1 (avilamycin); ***53024-98-9 (everninomicin)***

L14 ANSWER 7 OF 16 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2001:341006 BIOSIS
DOCUMENT NUMBER: PREV200100341006
TITLE: In vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan.
AUTHOR(S): Miyazaki, Shuichi [Reprint author]; Tateda, Kazuhiro;

Matsumoto, Tetsuya; Ohno, Akira; Ishii, Yoshikazu; Furuya, Nobuhiko; Yamaguchi, Keizo

CORPORATE SOURCE: Department of Toho, University School of Medicine, Omoir-nishi, 5-21-16, Ota-ku, Tokyo, 143-8540, Japan
shuichi@med.toho-u.ac.jp

SOURCE: Journal of Antimicrobial Chemotherapy, (June, 2001) Vol. 47, No. 6, pp. 900-901. print.
CODEN: JACHDX. ISSN: 0305-7453.

DOCUMENT TYPE: Letter
LANGUAGE: English
ENTRY DATE: Entered STN: 18 Jul 2001
Last Updated on STN: 19 Feb 2002

TI In vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan.

IT Major Concepts
Molecular Genetics (Biochemistry and Molecular Biophysics); Pharmacology

IT Chemicals & Biochemicals
everninomicin : antibacterial-drug, in vitro antimicrobial activity; penicillin

RN 53024-98-9 (***everninomicin***)
1406-05-9 (penicillin)

GEN Streptococcus pneumoniae erm ***gene*** (Gram-Positive Cocci);
Streptococcus pneumoniae mef ***gene*** (Gram-Positive Cocci)

L14 ANSWER 8 OF 16 CAPLUS

ACCESSION NUMBER: 2001:565072 CAPLUS
DOCUMENT NUMBER: 135:148261
TITLE: The Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in the development of new antibiotics

INVENTOR(S): Staffa, Alfredo; Zazopoulos, Emmanuel; Mercure, Stephane; Nowacki, Piotr
PATENT ASSIGNEE(S): Ecopia Biosciences Inc., Can.; Farnet, Chris

SOURCE: PCT Int. Appl., 177 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001055180	A2	20010802	WO 2001-CA128	20010129
WO 2001055180	A3	20020110		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1252316	A2	20021030	EP 2001-903544	20010129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-177711P P 20000127
WO 2001-CA128 W 20010129

AB The present invention relates to isolated genetic sequences encoding proteins which direct the biosynthesis of the antibiotic ***everninomicin*** in Micromonospora carbonacea. The isolated biosynthetic ***gene*** cluster serves as a substrate for bioengineering of antibiotic structures.

TI The Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in the development of new antibiotics

AB The present invention relates to isolated genetic sequences encoding proteins which direct the biosynthesis of the antibiotic ***everninomicin*** in Micromonospora carbonacea. The isolated biosynthetic ***gene*** cluster serves as a substrate for bioengineering of antibiotic structures.

ST Micromonospora ***everninomicin*** biosynthesis ***gene*** cluster sequence; antibiotic design ***everninomicin*** biosynthesis ***gene*** cluster sequence

IT Micromonospora carbonacea
(Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(ORF, of ***everninomicin*** biosynthesis ***gene*** cluster; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Drug design
(of antibiotic ***everninomicin*** derivs.; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Genetic engineering
(of antibiotic synthesis; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT DNA sequences
(of ***everninomicin*** biosynthesis ***gene*** cluster of Micromonospora carbonacea; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Protein sequences
(of open reading frames of ***everninomicin*** biosynthesis ***gene*** cluster of Micromonospora carbonacea; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT ***Gene***
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(open reading frame, of ***everninomicin*** biosynthesis ***gene*** cluster; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT Genetic polymorphism
(single nucleotide, in ***everninomicin*** biosynthesis ***gene*** cluster; Micromonospora carbonacea ***gene*** cluster

responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT 53024-98-9D, ***Everninomicin*** , analogs, derivs.
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT 352404-35-4 352404-38-7 352404-39-8 352404-40-1 352404-42-3
352404-43-4 352404-44-5 352404-45-6 352404-46-7 352404-47-8
352404-48-9 352404-49-0 352404-50-3 352404-51-4 352404-52-5
352404-53-6 352404-54-7 352404-56-9 352404-57-0 352404-58-1
352404-59-2 352404-60-5 352404-61-6 352404-62-7 352404-63-8
352404-64-9 352404-65-0 352404-66-1 352404-67-2 352404-68-3
352404-70-7 352404-71-8 352404-72-9 352404-73-0 352404-74-1
352404-75-2 352404-76-3 352404-77-4 352404-78-5 352404-80-9
352404-82-1 352404-83-2 352404-84-3 352404-85-4 352404-86-5
352404-87-6 352404-88-7 352404-89-8 352404-90-1 352434-69-6
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(amino acid sequence; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

IT 352404-34-3 352404-36-5 352404-37-6 352404-41-2 352404-55-8
352404-69-4 352404-79-6 352404-81-0
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; Micromonospora carbonacea ***gene*** cluster responsible for ***everninomicin*** biosynthesis and its use in development of new antibiotics)

L14 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:526200 CAPLUS
DOCUMENT NUMBER: 135:133123
TITLE: ***Everninomicin*** biosynthetic genes in Micromonospora carbonacea
INVENTOR(S): Hosted, Thomas J.; Horan, Ann C.; Wang, Tim X.
PATENT ASSIGNEE(S): Schering Corporation, USA
SOURCE: PCT Int. Appl., 109 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051639	A2	20010719	WO 2001-US1187	20010112
WO 2001051639	A3	20020228		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,

BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 2004101832 A1 20040527 US 2001-758759 20010111
PRIORITY APPLN. INFO.: US 2000-175751P P 20000112
AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin ***everninomicin*** and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the ***everninomicin*** structure. The DNA sequence for the ***gene*** clusters responsible for encoding ***everninomicin*** biosynthetic genes, which provide the machinery for producing ***everninomicin*** , are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel ***everninomicin*** related compds. based on ***everninomicin*** , arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in ***everninomicin*** . A Micromonospora site-specific integrase ***gene*** is also provided, which can be incorporated in a vector for integration into any actinomycete, and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an actinomycete chromosome using this particular vector.
TI ***Everninomicin*** biosynthetic genes in Micromonospora carbonacea
AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin ***everninomicin*** and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the ***everninomicin*** structure. The DNA sequence for the ***gene*** clusters responsible for encoding ***everninomicin*** biosynthetic genes, which provide the machinery for producing ***everninomicin*** , are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel ***everninomicin*** related compds. based on ***everninomicin*** , arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in ***everninomicin*** . A Micromonospora site-specific integrase ***gene*** is also provided, which can be incorporated in a vector for integration into any actinomycete, and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an actinomycete chromosome using this particular vector.
ST sequence ***gene*** ***everninomicin*** biosynthesis Micromonospora; integrase ***gene*** sequence Micromonospora
; PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrW; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrX; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrY; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrZ; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsA; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsB; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsC; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(heat stress, homol.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT Flavoproteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hydrogen ion-sodium-exchanging; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(membrane; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(multidrug; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf10; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf11; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf1; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)
IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST

(Analytical study); BIOL (Biological study); PREP (Preparation)
(orf2; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf3; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf4; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf5; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf6; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf7; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf8; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT ***Gene*** , microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf9; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Enzymes, analysis
RL: ANT (Analyte); ANST (Analytical study)
(tailoring; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Transcription factors
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(.sigma.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351394-42-8P 351394-43-9P 351394-44-0P 351394-46-2P 351394-47-3P
351394-48-4P 351394-49-5P 351394-50-8P 351394-51-9P 351394-52-0P
351394-53-1P 351394-54-2P 351394-55-3P 351394-56-4P 351394-57-5P
351394-58-6P 351394-59-7P 351394-60-0P 351394-61-1P 351394-62-2P
351394-63-3P 351394-64-4P 351394-65-5P 351394-66-6P 351394-67-7P
351394-68-8P 351394-69-9P 351394-70-2P 351394-71-3P 351394-72-4P
351394-73-5P 351394-74-6P 351394-75-7P 351394-76-8P 351394-77-9P
351394-78-0P 351394-79-1P 351394-80-4P 351394-81-5P 351394-82-6P
351394-83-7P 351394-84-8P 351394-85-9P 351394-86-0P 351394-87-1P
351394-88-2P 351394-89-3P 351394-90-6P 351394-91-7P 351394-92-8P

351394-93-9P 351394-94-0P 351394-95-1P 351394-96-2P 351394-97-3P
351394-98-4P 351394-99-5P 351395-00-1P 351395-01-2P 351395-02-3P
351395-03-4P 351395-04-5P 351395-05-6P 351395-06-7P 351395-07-8P
351395-08-9P 351395-09-0P 351395-10-3P 351395-11-4P 351395-12-5P
351395-13-6P 351395-14-7P 351395-15-8P 351395-16-9P 351395-17-0P
351395-18-1P 351395-19-2P 351395-20-5P 351395-21-6P 351395-22-7P
351395-23-8P 351395-24-9P 351395-25-0P 351395-26-1P 351395-27-2P
351395-29-4P 351395-30-7P 351395-31-8P 351395-32-9P 351395-33-0P
351395-34-1P 351395-35-2P 351395-36-3P 351395-37-4P 351395-38-5P
351395-39-6P 351395-40-9P 351395-41-0P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 480-64-8P, orsellinic acid
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(biosynthesis; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9033-07-2, glycosyltransferase
RL: ANT (Analyte); ANST (Analytical study)
(***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9001-18-7P, lipoamide dehydrogenase 9001-40-5P, Dehydrogenase, glucose-6-phosphate 9001-63-2P, Lysozyme 9001-92-7P, Protease 9012-30-0P, acetyltransferase 9015-72-9P, Dehalogenase 9023-90-9P, Methylmalonyl-CoA mutase 9023-94-3P, propionyl-CoA carboxylase 9026-03-3P, DTDP-glucose synthetase 9026-39-5P, Uridine kinase 9026-43-1P, Serine threonine kinase 9026-97-5P, Deoxyribose-phosphate aldolase 9027-41-2P, Hydrolase 9028-86-8P, Aldehyde dehydrogenase 9028-93-7P, IMP dehydrogenase 9030-24-4P, uracil phosphoribosyltransferase 9031-09-8P, Phosphotransferase 9031-96-3P, peptidase 9033-25-4P, methyl transferase 9035-73-8P, Oxidase 9045-37-8P, 6-Methylsalicylate synthetase 37211-59-9P, GDP-mannose 4,6-dehydratase 37259-54-4P, DTDP-glucose dehydratase 39369-30-7P, rRNA methyltransferase 52350-85-3P, integrase 59536-73-1P, Phosphomannomutase 67340-07-2P, Acyl-CoA carboxylase 121684-25-1P, Orsellinic acid synthase 128964-89-6P, cytochrome D oxidase 259093-18-0P, Epimerase, thymidine diphosphoglucose
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 53024-98-9P, ***everninomicin***
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9031-66-7P, Aminotransferase 9044-86-4P, Dehydratase 9055-15-6P, Oxidoreductase 37342-00-0P, Epimerase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hexose; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9035-51-2P, P450, properties 9046-59-7P, Hydroxylase 9055-20-3P,

Chloroperoxidase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9028-06-2P, L-Proline-4-hydroxylase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homolog; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351395-28-3P 351395-42-1P 351540-05-1P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(nucleotide sequence; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351396-41-3 351396-42-4 351396-43-5 351396-44-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351396-45-7 351396-46-8 351396-47-9 351396-48-0 351396-49-1
RL: PRP (Properties)
(unclaimed sequence; ***everninomicin*** biosynthetic genes in M

SYSTEM LIMITS EXCEEDED

L14 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:454210 CAPLUS
DOCUMENT NUMBER: 135:177899
TITLE: In vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan
AUTHOR(S): Miyazaki, Shuichi; Tateda, Kazuhiro; Matsumoto, Tetsuya; Ohno, Akira; Ishii, Yoshikazu; Furuya, Nobuhiko; Yamaguchi, Keizo
CORPORATE SOURCE: Department of Toho University School of Medicine, Tokyo, 143-8540, Japan
SOURCE: Journal of Antimicrobial Chemotherapy (2001), 47(6), 900-901
CODEN: JACHDX; ISSN: 0305-7453
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The utility of a novel ***everninomicin*** (SCH27899) against multiple drug resistant Streptococcus pneumoniae isolates from Japan was evaluated. The results demonstrated that SCH27899 is highly potent against penicillin, macrolide, and penicillin/macrolide resistant S. pneumoniae strains.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI In vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan
AB The utility of a novel ***everninomicin*** (SCH27899) against multiple drug resistant Streptococcus pneumoniae isolates from Japan was evaluated. The results demonstrated that SCH27899 is highly potent against penicillin, macrolide, and penicillin/macrolide resistant S. pneumoniae strains.

IT ***Gene*** , microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(erm; in vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan)
IT Antibiotic resistance
Multidrug resistance
Streptococcus pneumoniae
(in vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan)
IT ***Gene*** , microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(mef; in vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan)
IT 69-53-4, Ampicillin 1403-66-3, Gentamicin 1404-90-6, Vancomycin 10118-90-8, Minocycline 51025-85-5, Arbekacin 61036-62-2, Teicoplanin 64221-86-9, Imipenem 109545-84-8, sch27899
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(in vitro antimicrobial activities of a novel ***everninomicin*** for multiple drug-resistant Streptococcus pneumoniae isolates in Japan)

L14 ANSWER 11 OF 16 MEDLINE on STN
ACCESSION NUMBER: 2001113299 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11083650
TITLE: Presence of variations in ribosomal protein L16 corresponding to susceptibility of enterococci to oligosaccharides (Avilamycin and evernimicin).
AUTHOR: Aarestrup F M; Jensen L B
CORPORATE SOURCE: Danish Veterinary Laboratory, DK-1790 Copenhagen V, Denmark.. faa@svs.dk
SOURCE: Antimicrobial agents and chemotherapy, (2000 Dec) 44 (12) 3425-7.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF291861; GENBANK-AF291862; GENBANK-AF291863; GENBANK-AF291864; GENBANK-AF291865
ENTRY MONTH: 200102
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20021217
Entered Medline: 20010215
AB Fragments (414 bp) of the ***gene*** -encoding ribosomal protein L16 from Enterococcus faecium and Enterococcus faecalis that were resistant and susceptible to the oligosaccharide antibiotics avilamycin and evernimicin (SCH 27899) were sequenced and compared. The susceptible E. faecalis and E. faecium isolates had sequences that were similar to those of the type strains. All resistant E. faecalis isolates contained the same base pair variation [CGT (Arg-56) --> CAT (His-56)]. The same variation and two additional variations [ATC (Ile-52) --> ACC (Thr-52) and ATC (Ile-52) --> AGC (Ser-52)] were found in the resistant E. faecium isolates. This study indicated that resistance to the oligosaccharides in

enterococci is associated with variations in the ribosomal protein L16.
AB Fragments (414 bp) of the ***gene*** -encoding ribosomal protein L16 from Enterococcus faecium and Enterococcus faecalis that were resistant and susceptible to the oligosaccharide antibiotics avilamycin and. . .
RN 11051-71-1 (avilamycin); ***53024-98-9 (everninomicin)***

L14 ANSWER 12 OF 16 MEDLINE on STN
ACCESSION NUMBER: 2001068629 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11036030
TITLE: Evernimicin (SCH27899) inhibits a novel ribosome target site: analysis of 23S ribosomal DNA mutants.
AUTHOR: Adrian P V; Mendrick C; Loebenberg D; McNicholas P; Shaw K J; Klugman K P; Hare R S; Black T A
CORPORATE SOURCE: Pneumococcal Diseases Research Unit, South African Institute for Medical Research, University of the Witwatersrand, and the Medical Research Council, Johannesburg, South Africa.. adrian@kgk.fgg.eur.nl
SOURCE: Antimicrobial agents and chemotherapy, (2000 Nov) 44 (11) 3101-6.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20021217
Entered Medline: 20010104
AB Spontaneous mutants of susceptible clinical and laboratory isolates of Streptococcus pneumoniae exhibiting reduced susceptibility to evernimicin (SCH27899; MIC, 0.5 to 4.0 mg/liter) were selected on plates containing evernimicin. Four isolates that did not harbor mutations in rplP (which encodes ribosomal protein L16) were further analyzed. Whole chromosomal DNA or PCR products of the 23S ribosomal DNA (rDNA) operons from these mutants could be used to transform the susceptible S. pneumoniae strain R6 to resistance at frequencies of 10(-5) and 10(-4), respectively, rates 10- to 100-fold lower than that for a single-allele chromosomal marker. The transformants appeared slowly (48 to 72 h) on selective medium, and primary transformants passaged on nonselective medium produced single colonies that displayed heterogeneous susceptibilities to evernimicin. A single passage on selective medium of colonies derived from a single primary transformant homogenized the resistance phenotype. Sequence analysis of the 23S rDNA and rRNA from the resistant mutants revealed single, unique mutations in each isolate at the equivalent Escherichia coli positions 2469 (A --> C), 2480 (C --> T), 2535 (G --> A), and 2536 (G --> C). The mutations map within two different stems of the peptidyltransferase region of domain V. Because multiple copies of rDNA are present in the chromosome, ***gene*** conversion between mutant and wild-type 23S rDNA alleles may be necessary for stable resistance. Additionally, none of the characterized mutants showed cross-resistance to any of a spectrum of protein synthesis inhibitors, suggesting that the target site of evernimicin may be unique.
AB . . . two different stems of the peptidyltransferase region of domain V. Because multiple copies of rDNA are present in the chromosome, ***gene*** conversion between mutant and wild-type 23S rDNA alleles may be necessary for stable resistance. Additionally, none of the characterized mutants. . .

RN ***53024-98-9 (everninomicin)***

L14 ANSWER 13 OF 16 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2000277858 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10817686
TITLE: Evernimicin (SCH27899) inhibits both translation and 50S ribosomal subunit formation in Staphylococcus aureus cells.
AUTHOR: Champney W S; Tober C L
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, J. H. Quillen College of Medicine, East Tennessee State University, Johnson City, Tennessee 37614, USA.. champney@etsu.edu
SOURCE: Antimicrobial agents and chemotherapy, (2000 Jun) 44 (6) 1413-7.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000720
Last Updated on STN: 20021217
Entered Medline: 20000711

AB The effects of the ***everninomicin*** antibiotic evernimicin (SCH27899) on growing Staphylococcus aureus cells were investigated. Cellular growth rates and viable cell numbers decreased with increasing antibiotic concentrations. The rate of protein synthesis, measured as (35)S-amino acid incorporation, declined in parallel with the growth rate. Significantly, the formation of the 50S ribosomal subunit was inhibited in a dose-dependent fashion as well. 30S ribosomal subunit synthesis was not affected over the same concentration range. Evernimicin did not stimulate the breakdown of mature ribosomal subunits. Pulse-chase labeling experiments revealed a reduced rate of 50S subunit formation in drug-treated cells. Two erythromycin-resistant strains of S. aureus that carried the ermC ***gene*** were as sensitive as wild-type cells to antibiotic inhibition. In addition, two methicillin-resistant S. aureus organisms, one sensitive to erythromycin and one resistant to the macrolide, showed similar sensitivities to evernimicin. These results suggest a use for this novel antimicrobial agent against antibiotic-resistant bacterial infections.

AB The effects of the ***everninomicin*** antibiotic evernimicin (SCH27899) on growing Staphylococcus aureus cells were investigated. Cellular growth rates and viable cell numbers decreased with increasing. . . a reduced rate of 50S subunit formation in drug-treated cells. Two erythromycin-resistant strains of S. aureus that carried the ermC ***gene*** were as sensitive as wild-type cells to antibiotic inhibition. In addition, two methicillin-resistant S. aureus organisms, one sensitive to erythromycin. . .

RN ***53024-98-9 (everninomicin)***

L14 ANSWER 14 OF 16 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2000145398 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10681347
TITLE: Mutations in ribosomal protein L16 conferring reduced susceptibility to evernimicin (SCH27899): implications for mechanism of action.
AUTHOR: Adrian P V; Zhao W; Black T A; Shaw K J; Hare R S; Klugman

K P

CORPORATE SOURCE: Pneumococcal Diseases Research Unit of the South African Institute for Medical Research, University of the Witwatersrand and the Medical Research Council, Johannesburg, South Africa.. adrian@kgk.fgg.eur.nl

SOURCE: Antimicrobial agents and chemotherapy, (2000 Mar) 44 (3) 732-8.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF126059; GENBANK-AF126060; GENBANK-AF126061
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000413
Last Updated on STN: 20021217
Entered Medline: 20000403

AB A clinical isolate of Streptococcus pneumoniae (SP#5) that showed decreased susceptibility to evernimicin (MIC, 1.5 microgram/ml) was investigated. A 4,255-bp EcoRI fragment cloned from SP#5 was identified by its ability to transform evernimicin-susceptible S. pneumoniae R6 (MIC, 0.03 microgram/ml) such that the evernimicin MIC was 1.5 microgram/ml. Nucleotide sequence analysis of this fragment revealed that it contained portions of the S10-spc ribosomal protein operons. The nucleotide sequences of resistant and susceptible isolates were compared, and a point mutation (thymine to guanine) that causes an Ile52-Ser substitution in ribosomal protein L16 was identified. The role of this mutation in decreasing susceptibility to evernimicin was confirmed by direct transformation of the altered L16 ***gene*** . The presence of the L16 mutation in the resistant strain suggests that evernimicin is an inhibitor of protein synthesis. This was confirmed by inhibition studies using radiolabeled substrates, which showed that the addition of evernimicin at sub-MIC levels resulted in a rapid decrease in the incorporation of radiolabeled isoleucine in a susceptible isolate (SP#3) but was much less effective against SP#5. The incorporation of isoleucine showed a linear response to the dose level of evernimicin. The incorporation of other classes of labeled substrates was unaffected or much delayed, indicating that these were secondary effects.

AB . . . identified. The role of this mutation in decreasing susceptibility to evernimicin was confirmed by direct transformation of the altered L16 ***gene*** . The presence of the L16 mutation in the resistant strain suggests that evernimicin is an inhibitor of protein synthesis. This. . .

RN ***53024-98-9 (everninomicin)*** ; 73-32-5 (Isoleucine)

L14 ANSWER 15 OF 16 EMBASE
on STN

ACCESSION NUMBER: 2000308389 EMBASE

TITLE: The millennium bugs - The need for and development of new antibacterials.

AUTHOR: Bax R.; Mullan N.; Verhoef J.
CORPORATE SOURCE: N. Mullan, Anti-Infectives Therapeutic Unit, SmithKline Beecham Pharmaceuticals, New Frontiers Science Park South, Harlow, Essex CM19 5AW, United Kingdom

SOURCE: International Journal of Antimicrobial Agents, (2000) 16/1 (51-59).
Refs: 32

ISSN: 0924-8579 CODEN: IAAGEA
PUBLISHER IDENT.: S 0924-8579(00)00189-8
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Global antibacterial resistance is becoming an increasing public health problem. Bacteria resistant to almost all of the available antibacterials have been identified. The pharmaceutical industry and fledgling biotechnology companies are responding to the threat of antibiotic resistance with renewed efforts to discover novel antibacterials in attempts to overcome bacterial resistance. Both short term and long term strategies are being vigorously pursued. Short-term efforts are focused on developing novel antibacterial agents with a narrow spectrum of action to combat the problem of Gram- positive resistant bacteria. Long-term approaches include the use of microbial genomic sequencing techniques to discover novel agents active against potentially new bacterial targets. Better use of existing agents using pharmacodynamic data to optimise antibiotic regimens is increasingly being addressed and the hope is that such measures will prevail until the newer agents are available. (C) 2000 Elsevier Science B.V. and International Society of Chemotherapy.
CT Medical Descriptors:
*drug research
*antibiotic resistance
*biotechnology
drug industry
bacterial gene
sequence analysis
multidrug resistance
methicillin resistant Staphylococcus aureus
Enterococcus
review
priority journal
*antibiotic agent
*dalfopristin plus quinupristin
*sch 27899
****everninomicin***
*daptomycin
*linezolid
*telithromycin
*ly 333328
vancomycin
oxazolidinone derivative
ketolide
erythromycin
grepafloxacin
trovafloxacin
moxifloxacin
gatifloxacin
ciprofloxacin
beta lactam antibiotic
GV 143253
glycopeptide
tetracycline derivative
unclassified drug

RN (dalfopristin plus quinupristin) 126602-89-9; (sch 27899) 109545-84-8; (***everninomicin***) 53024-98-9; (daptomycin) 103060-53-3; (linezolid) 165800-03-3; (telithromycin) 173838-31-8; (ly 333328) 171099-57-3; (vancomycin) 1404-90-6, 1404-93-9; (erythromycin) 114-07-8, 70536-18-4; (grepafloxacin) 119914-60-2; (trovafloxacin) 146836-84-2;. . .

L14 ANSWER 16 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2000416497 EMBASE

TITLE: Occurrence, selection and spread of resistance to antimicrobial agents used for growth promotion for food animals in Denmark.

AUTHOR: Aarestrup F.M.

SOURCE: APMIS, Supplement, (2000) 108/101 (5-48).
Refs: 304
ISSN: 0903-465X CODEN: APSUEN

COUNTRY: Denmark

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 004 Microbiology
017 Public Health, Social Medicine and Epidemiology
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

AB 14.1 Introduction: This thesis is based on a number of monitoring and research programmes initiated at the Danish Veterinary Laboratory with the aim to determine the occurrence, selection and spread of resistance to antimicrobial agents for growth promotion. The thesis gives a brief overview of the use, consumption, function and benefit of antimicrobial growth promoters and a more thorough description of the potential resistance problems arising by the use of these agents. 14.2 The use of antimicrobial agents in a historical perspective: Soon after the introduction of antimicrobial agents for therapy of bacterial infections in humans and animals, the growth promoting effect of antimicrobial agents was observed, and since the beginning of the 1950'ties antimicrobial agents have been included in feed for food animals as a way to improve growth and reduce production costs. 14.3 Consumption of antimicrobial growth promoters: Exact figures on the consumption of antimicrobial agents for clinical and growth promoting purposes are very difficult to get, and estimates are only available for a few countries. In Denmark, the total annual consumption of antimicrobial agents for growth promotion increased from 67 tonnes to 116 tonnes from 1989 to 1995. After the ban on avoparcin in 1995 the total consumption of growth promoters decreased to 94 tonnes. An increase up to 107 tonnes took place during 1996 and 1997, but during 1998, the consumption decreased to approximately 49 tonnes. The data that are available for different countries show that the use of antimicrobial agents for growth promotion normally equals or exceeds the usage of antimicrobial agents for therapy for food animals. Based on the information available, it can be estimated that the financial sale of antimicrobial agents for animals amounts to approximately 25% to 35% of the world-wide sale, of which the use of antimicrobial agents as feed additives is at least 50%. 14.4 Mode of action of antimicrobial growth promoters: The mode of action of antimicrobial growth promoters is not fully understood. However, the main effects are believed to be a reduction of the growth of bacteria in the intestinal tract and thereby less microbial degradation of useful nutrients, and the prevention of infections with pathogenic bacteria. 14.5 Benefit from the use of antimicrobial growth promoters: Numerous studies on the economic benefit

of the use of antimicrobial growth promoters have been performed. The growth response is normally larger in young animals than in older animals. Large variations in the estimates have been observed, but in general a improvement in growth rate and feed utilisation has been observed. 14.6 Susceptibility and resistance to antimicrobial growth promoters: The definition of a bacterium as susceptible or resistant to an antimicrobial agent ultimately depends on clinical outcome. Since the exact mode of action of antimicrobial growth promoters are not known, the only way to define break points is based on the population distributions of susceptibilities to different agents. For antimicrobial agents used both for therapy and growth promotion the break points for therapy have been used. For avilamycin, avoparcin, flavomycin, monensin and salinomycin, that are used for growth promotion only, tentative break points based on populations distributions have to be defined. The tentative break points for avoparcin and avilamycin have been confirmed by cross-resistance to other antimicrobial agents belonging to the same class and the presence of resistance mechanisms. 14.7 Occurrence of and selection for resistance to antimicrobial agents used for growth promotion: Information on the occurrence of resistance is needed to guide policy and detect changes that require intervention strategies. In 1995, a continuous monitoring of antimicrobial resistance in bacteria isolated from food animals was established in Denmark. Among food animals three categories of bacteria (indicator bacteria, zoonotic bacteria and animal pathogens) are continuously isolated from broilers, cattle and pigs and tested for susceptibility to antimicrobial agents used for therapy and growth promotion by disc diffusion or MIC-determinations. In all known cases antimicrobial resistance has emerged following the introduction of new antimicrobial compounds for therapy. The occurrence of resistance to antimicrobial agents used for growth promotion indicates that resistance will also emerge following the introduction of antimicrobials for growth promotion. Comparison of the occurrence of resistance among reservoirs with different usage of antimicrobial agents for growth promotion also shows that the occurrence of resistance will follow the usage. Epidemiological studies have shown that the use of both avilamycin and avoparcin for growth promotion will select for resistance among E. faecium, and feeding experiments with tylosin used both in concentrations for therapy and growth promotion have shown that this will select for macrolide resistance among both enterococci and staphylococci. 14.8 Therapeutical relevance of antimicrobial growth promoters: Resistance to a growth promoter will only cause problems in relation to treatment if this resistance interferes with therapy of humans or animals. In Denmark 11 different antimicrobial agents were approved for growth promotion until recently. Of these avilamycin, avopacin, bacitracin, spiramycin, tylosin and virginiamycin are either also approved for treatment, or belong to classes approved or under development for treatment of humans or animals. 14.9 Mechanisms of resistance: This chapter describes the most common mechanisms of resistance to the most important antimicrobial agents used for growth promotion. The precise mechanism of action of avilamycin has not been finally elucidated, but decreased susceptibility can be caused by single base-pair mutations in the ***gene*** encoding ribosomal protein L16 of enterococci, and this is currently the most likely mechanism of resistance. The vanA ***gene*** located on the transposon Tn1546 is the most commonly observed mechanism mediating acquired resistance to glycopeptides among enterococcal isolates from food animals. The origin of this ***gene*** is believed to be the glycopeptide producing organisms. Resistance to macrolides may be based on different mechanisms, but in Gram positive bacteria such as staphylococci,

streptococci and enterococci, enzymes that methylate the target site of the antibiotics on the ribosome, the so-called erm genes, have been observed as the most common cause of resistance. The mechanism of resistance to macrolides in Campylobacter has not been totally elucidated, but is probably due to mutations in the 23S part of rRNA. Five different genes encoding resistance to the streptogramin A part of streptogramins have been described in staphylococci. Among enterococci two genes (satA and satG) have been observed among resistant E. faecium isolates of both human and food animal origin. 14.10 Spread of resistance from food animals to humans: Several studies have shown that zoonotic bacteria may acquire resistance among food animals, and thereafter transfer to and cause infections in man. Spread of resistance genes from bacteria in food animals to bacteria in humans has also been reported. This includes resistance to the streptothricin antibiotic nourseothricin and resistance to the aminoglycoside antibiotic apramycin. Macrolides are the drug of choice in relation to treatment of infections with zoonotic Campylobacter in humans. A frequent occurrence of resistance to macrolides has been observed among C. coli from pigs in several countries, and the spread of these bacteria to humans may cause problems in relation to treatment. Of the erm-genes encoding macrolide resistance, the ermA and ermC are the most commonly observed in staphylococci, whereas ermB is the most common in streptococci and enterococci. Identical genes can be observed among isolates of human and animal origin, but it is not known to what extent transfer takes place. In relation to the avilamycin, avoparcin, and virginiamycin the occurrence of resistance in enterococci has gained most interest. The frequent occurrence of VRE in food animals and fresh meat suggests that humans have been exposed to VRE either by direct contact with animals or by consumption of meat. Furthermore, identical strains of VRE and identical types of Tn1546 have been isolated from humans and animals. The satA and satG genes encoding streptogramin resistance have been observed in E. faecium isolates of both human and food animal origin, indicating that they share a common reservoir of resistance genes.

AB . . . action of avilamycin has not been finally elucidated, but decreased susceptibility can be caused by single base-pair mutations in the ***gene*** encoding ribosomal protein L16 of enterococci, and this is currently the most likely mechanism of resistance. The vanA ***gene*** located on the transposon Tn1546 is the most commonly observed mechanism mediating acquired resistance to glycopeptides among enterococcal isolates from food animals. The origin of this ***gene*** is believed to be the glycopeptide producing organisms. Resistance to macrolides may be based on different mechanisms, but in Gram. . .

CT Medical Descriptors:
*antibiotic . . .
drug therapy
streptogramin derivative: DT, drug therapy
carbadox: DT, drug therapy
olaquindox: DT, drug therapy
bambermycin: DT, drug therapy
monensin: DT, drug therapy
salinomycin: DT, drug therapy
everninomicin: DT, drug therapy
avilamycin: DT, drug therapy
tylosin: DT, drug therapy
tetracycline derivative: DT, drug therapy
sulfonamide: DT, drug therapy
penicillin G: DT, drug therapy
streptomycin:. . .

```
RN.  .  .  (avoparcin) 37332-99-3; (spiramycin) 8025-81-8; (bacitracin)
     1405-87-4; (virginiamycin) 11006-76-1; (carbadox) 6804-07-5; (olaquindox)
     23696-28-8; (bambermycin) 11015-37-5; (monensin) 17090-79-8, 22373-78-0;
     (salinomycin) 53003-10-4, 55721-31-8; (  ***everninomicin***  )
     53024-98-9; (avilamycin) 11051-71-1, 69787-79-7, 69787-80-0; (tylosin)
     1401-69-0; (penicillin G) 1406-05-9, 61-33-6; (streptomycin) 57-92-1;
     (lasalocid) 11054-70-9, 25999-20-6, 25999-31-9; (meticillin) 132-92-3,
     38882-79-0,.  .  .


=> d hist

     (FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:34:16 ON 01 JUL 2004
L1          352 S EVERNINOMICIN
L2            4 S L1 (3A) BIOSYNTHE?
L3            0 S L1 AND GENE (2A)PATH?
L4           20 S L1 AND GENE
L5         3135 S MICROMONOSPORA
L6           72 S MICROMONOSPORA CARBONACEA
L7         7464 S ACTINOMYCETE
L8          327 S L5 AND L7
L9           21 S M. CARBONACEA
L10          75 S L6 OR L9
L11          26 S L10 AND L1
L12          20 DUP REM L11 (6 DUPLICATES REMOVED)
L13           4 DUP REM L2 (0 DUPLICATES REMOVED)
L14          16 DUP REM L4 (4 DUPLICATES REMOVED)

=> s l8 and l1
L15           4 L8 AND L1

=> dup rem l15
PROCESSING COMPLETED FOR L15
L16           2 DUP REM L15 (2 DUPLICATES REMOVED)

=> d ibib abs kwic total l16

L16  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2001:526200  CAPLUS
DOCUMENT NUMBER:          135:133123
TITLE:                      ***Everninomicin***   biosynthetic genes in
                            ***Micromonospora***   carbonacea
INVENTOR(S):              Hosted, Thomas J.; Horan, Ann C.; Wang, Tim X.
PATENT ASSIGNEE(S):       Schering Corporation, USA
SOURCE:                   PCT Int. Appl., 109 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
     WO 2001051639      A2   20010719      WO 2001-US1187   20010112
     WO 2001051639      A3   20020228
```

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2004101832 A1 20040527 US 2001-758759 20010111

PRIORITY APPLN. INFO.: US 2000-175751P P 20000112

AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin ***everninomicin*** and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the ***everninomicin*** structure. The DNA sequence for the gene clusters responsible for encoding ***everninomicin*** biosynthetic genes, which provide the machinery for producing ***everninomicin*** , are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel ***everninomicin*** related compds. based on ***everninomicin*** , arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in ***everninomicin*** . A ***Micromonospora*** site-specific integrase gene is also provided, which can be incorporated in a vector for integration into any ***actinomycete*** , and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an ***actinomycete*** chromosome using this particular vector.

TI ***Everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea

AB This invention is directed to nucleic acids which encode the proteins that direct the synthesis of the orthosomycin ***everninomicin*** and to use of the nucleic acids and proteins to produce compds. exhibiting antibiotic activity based on the ***everninomicin*** structure. The DNA sequence for the gene clusters responsible for encoding ***everninomicin*** biosynthetic genes, which provide the machinery for producing ***everninomicin*** , are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel ***everninomicin*** related compds. based on ***everninomicin*** , arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in ***everninomicin*** . A ***Micromonospora*** site-specific integrase gene is also provided, which can be incorporated in a vector for integration into any ***actinomycete*** , and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an ***actinomycete*** chromosome using this particular vector.

ST sequence gene ***everninomicin*** biosynthesis ***Micromonospora*** ; integrase gene sequence ***Micromonospora***

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrW; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrX; ***everninomicin*** biosynthetic genes in

Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrY; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evrZ; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsA; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsB; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(evsC; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(heat stress, homol.; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Flavoproteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hydrogen ion-sodium-exchanging; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Proteins, specific or class
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(membrane; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Transport proteins
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(multidrug; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf10; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf11; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf1; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf2; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf3; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf4; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf5; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf6; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf7; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf8; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf9; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Enzymes, analysis
RL: ANT (Analyte); ANST (Analytical study)
(tailoring; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT Transcription factors
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(.sigma.; ***everninomicin*** biosynthetic genes in

Micromonospora carbonacea)

IT 351394-42-8P 351394-43-9P 351394-44-0P 351394-46-2P 351394-47-3P
351394-48-4P 351394-49-5P 351394-50-8P 351394-51-9P 351394-52-0P
351394-53-1P 351394-54-2P 351394-55-3P 351394-56-4P 351394-57-5P
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351394-73-5P 351394-74-6P 351394-75-7P 351394-76-8P 351394-77-9P
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351395-34-1P 351395-35-2P 351395-36-3P 351395-37-4P 351395-38-5P
351395-39-6P 351395-40-9P 351395-41-0P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT 480-64-8P, orsellinic acid
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(biosynthesis; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT 9033-07-2, glycosyltransferase
RL: ANT (Analyte); ANST (Analytical study)
(***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT 9001-18-7P, lipoamide dehydrogenase 9001-40-5P, Dehydrogenase, glucose-6-phosphate 9001-63-2P, Lysozyme 9001-92-7P, Protease 9012-30-0P, acetyltransferase 9015-72-9P, Dehalogenase 9023-90-9P, Methylmalonyl-CoA mutase 9023-94-3P, propionyl-CoA carboxylase 9026-03-3P, DTDP-glucose synthetase 9026-39-5P, Uridine kinase 9026-43-1P, Serine threonine kinase 9026-97-5P, Deoxyribose-phosphate aldolase 9027-41-2P, Hydrolase 9028-86-8P, Aldehyde dehydrogenase 9028-93-7P, IMP dehydrogenase 9030-24-4P, uracil phosphoribosyltransferase 9031-09-8P, Phosphotransferase 9031-96-3P, peptidase 9033-25-4P, methyl transferase 9035-73-8P, Oxidase 9045-37-8P, 6-Methylsalicylate synthetase 37211-59-9P, GDP-mannose 4,6-dehydratase 37259-54-4P, DTDP-glucose dehydratase 39369-30-7P, rRNA methyltransferase 52350-85-3P, integrase 59536-73-1P, Phosphomannomutase 67340-07-2P, Acyl-CoA carboxylase 121684-25-1P, Orsellinic acid synthase 128964-89-6P, cytochrome D oxidase 259093-18-0P, Epimerase, thymidine diphosphoglucose
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)

IT 53024-98-9P, ***everninomicin***
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)
IT 9031-66-7P, Aminotransferase 9044-86-4P, Dehydratase 9055-15-6P, Oxidoreductase 37342-00-0P, Epimerase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hexose; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)
IT 9035-51-2P, P450, properties 9046-59-7P, Hydroxylase 9055-20-3P, Chloroperoxidase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)
IT 9028-06-2P, L-Proline-4-hydroxylase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homolog; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)
IT 351395-28-3P 351395-42-1P 351540-05-1P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(nucleotide sequence; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)
IT 351396-41-3 351396-42-4 351396-43-5 351396-44-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; ***everninomicin*** biosynthetic genes in ***Micromonospora*** carbonacea)
IT 351396-45-7 351396-46-8 351396-47-9 351396-48-0 351396-49-1
RL: PRP (Properties)
(unclaimed sequence; ***everninomicin*** biosynthetic genes in ***Microm***

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SYSTEM LIMITS EXCEEDED
*** ***
L16 ANSWER 2 OF 2 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 77051095 MEDLINE
DOCUMENT NUMBER: PubMed ID: 993103
TITLE: Studies on juvenimicin, a new antibiotic. I. Taxonomy,
*** fermentation and antimicrobial properties. ***
AUTHOR: Hatano K; Higashide E; Shibata M
***SOURCE: Journal of antibiotics, (1976 Nov) 29 (11) 1163-70. ***
*** Journal code: 0151115. ISSN: 0021-8820.***
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197701
ENTRY DATE: Entered STN: 19900313
*** Last Updated on STN: 19900313***
*** Entered Medline: 19770125***
AB An ***actinomycete , strain No. T-1124, was found to produce new

macrolide antibiotics, juvenimicins. Based on the results of taxonomic studies, the strain was considered to be a new variety of ***micromonospora*** chalcea and the name ***Micromonospora*** chalcea var. izumensis is proposed. This strain also produced ***everninomicin*** . The production of juvenimicins was stimulated by addition of ferrous sulfate and magnesium sulfate in the fermentation medium. Among juvenimicins, juvenimicin A3 exhibited the most potent antimicrobial activities against gram-positive bacteria and furthermore was active against gram-negative bacteria.

AB An ***actinomycete*** , strain No. T-1124, was found to produce new macrolide antibiotics, juvenimicins. Based on the results of taxonomic studies, the strain was considered to be a new variety of ***micromonospora*** chalcea and the name ***Micromonospora*** chalcea var. izumensis is proposed. This strain also produced ***everninomicin*** . The production of juvenimicins was stimulated by addition of ferrous sulfate and magnesium sulfate in the fermentation medium. Among juvenimicins,. . .

CT *Anti-Bacterial Agents
Anti-Bacterial Agents: BI, biosynthesis
Anti-Bacterial Agents: PD, pharmacology
Bacteria: DE, drug effects
Culture Media
Fermentation
*** Micromonospora: CL, classification***
*** Micromonospora: CY, cytology***
*** Micromonospora: ME, metabolism***
Time Factors

=> d hist

(FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:34:16 ON 01 JUL 2004

L1	352	S	EVERNINOMICIN
L2	4	S	L1 (3A) BIOSYNTHE?
L3	0	S	L1 AND GENE (2A) PATH?
L4	20	S	L1 AND GENE
L5	3135	S	MICROMONOSPORA
L6	72	S	MICROMONOSPORA CARBONACEA
L7	7464	S	ACTINOMYCETE
L8	327	S	L5 AND L7
L9	21	S	M. CARBONACEA
L10	75	S	L6 OR L9
L11	26	S	L10 AND L1
L12	20	DUP REM	L11 (6 DUPLICATES REMOVED)
L13	4	DUP REM	L2 (0 DUPLICATES REMOVED)
L14	16	DUP REM	L4 (4 DUPLICATES REMOVED)
L15	4	S	L8 AND L1
L16	2	DUP REM	L15 (2 DUPLICATES REMOVED)

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	121.18	121.39

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL

```
                                                        ENTRY     SESSION
CA SUBSCRIBER PRICE                                    -17.64      -17.64

 SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 12:41:12 ON 01 JUL 2004

Connecting via Winsock to STN

Welcome to STN International!  Enter x:x

LOGINID:ssspta1635tav

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS'
AT 13:04:37 ON 01 JUL 2004
FILE 'MEDLINE' ENTERED AT 13:04:37 ON 01 JUL 2004
FILE 'EMBASE' ENTERED AT 13:04:37 ON 01 JUL 2004
COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.
FILE 'BIOSIS' ENTERED AT 13:04:37 ON 01 JUL 2004
COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC.(R)
FILE 'CAPLUS' ENTERED AT 13:04:37 ON 01 JUL 2004
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                     121.64     121.85

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                     -17.64     -17.64

=> d hist

     (FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:34:16 ON 01 JUL 2004
L1           352 S EVERNINOMICIN
L2             4 S L1 (3A) BIOSYNTHE?
L3             0 S L1 AND GENE (2A)PATH?
L4            20 S L1 AND GENE
L5          3135 S MICROMONOSPORA
L6            72 S MICROMONOSPORA CARBONACEA
L7          7464 S ACTINOMYCETE
L8           327 S L5 AND L7
L9            21 S M. CARBONACEA
L10           75 S L6 OR L9
L11           26 S L10 AND L1
L12           20 DUP REM L11 (6 DUPLICATES REMOVED)
L13            4 DUP REM L2 (0 DUPLICATES REMOVED)
L14           16 DUP REM L4 (4 DUPLICATES REMOVED)
L15            4 S L8 AND L1
L16            2 DUP REM L15 (2 DUPLICATES REMOVED)

=> s l1 and l7
L17            4 L1 AND L7
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=> dup rem l17
PROCESSING COMPLETED FOR L17
L18            2 DUP REM L17 (2 DUPLICATES REMOVED)

=> d ibib abs kwic total l18

L18  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2001:526200  CAPLUS
DOCUMENT NUMBER:          135:133123
TITLE:                      ***Everninomicin***   biosynthetic genes in
                          Micromonospora carbonacea
INVENTOR(S):              Hosted, Thomas J.; Horan, Ann C.; Wang, Tim X.
PATENT ASSIGNEE(S):       Schering Corporation, USA
SOURCE:                   PCT Int. Appl., 109 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

      PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
      ---------------   ----  --------       ---------------  --------
      WO 2001051639      A2   20010719       WO 2001-US1187   20010112
      WO 2001051639      A3   20020228
          W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL,
              IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK,
              MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM,
              TR, TT, TZ, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
              DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
      US 2004101832      A1   20040527       US 2001-758759   20010111
PRIORITY APPLN. INFO.:                    US 2000-175751P  P  20000112
AB    This invention is directed to nucleic acids which encode the proteins that
      direct the synthesis of the orthosomycin   ***everninomicin***   and to
      use of the nucleic acids and proteins to produce compds. exhibiting
      antibiotic activity based on the   ***everninomicin***   structure.  The
      DNA sequence for the gene clusters responsible for encoding
        ***everninomicin***   biosynthetic genes, which provide the machinery for
      producing   ***everninomicin***   , are provided.  Thus, this invention
      provides the nucleic acid sequences needed to synthesize novel
        ***everninomicin***   related compds. based on   ***everninomicin***   ,
      arising from modifications of the DNA sequence designed to change glycosyl
      and modified orsellinic acid groups contained in   ***everninomicin***   .
      A Micromonospora site-specific integrase gene is also provided, which can
      be incorporated in a vector for integration into any   ***actinomycete***
      , and, particularly into Monospora.  Thus, the invention further provides
      methods for introducing for introducing heterologous genes into an
        ***actinomycete***   chromosome using this particular vector.
TI      ***Everninomicin***   biosynthetic genes in Micromonospora carbonacea
AB    This invention is directed to nucleic acids which encode the proteins that
      direct the synthesis of the orthosomycin   ***everninomicin***   and to
      use of the nucleic acids and proteins to produce compds. exhibiting
      antibiotic activity based on the   ***everninomicin***   structure.  The
      DNA sequence for the gene clusters responsible for encoding
        ***everninomicin***   biosynthetic genes, which provide the machinery for
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producing ***everninomicin*** , are provided. Thus, this invention provides the nucleic acid sequences needed to synthesize novel ***everninomicin*** related compds. based on ***everninomicin*** , arising from modifications of the DNA sequence designed to change glycosyl and modified orsellinic acid groups contained in ***everninomicin*** . A Micromonospora site-specific integrase gene is also provided, which can be incorporated in a vector for integration into any ***actinomycete*** , and, particularly into Monospora. Thus, the invention further provides methods for introducing for introducing heterologous genes into an ***actinomycete*** chromosome using this particular vector.

ST sequence gene ***everninomicin*** biosynthesis Micromonospora; integrase gene sequence Micromonospora

; BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(evrZ; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(evsA; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(evsB; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(evsC; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Proteins, specific or class

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(heat stress, homol.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Flavoproteins

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(homol.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Transport proteins

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(hydrogen ion-sodium-exchanging; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Proteins, specific or class

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(membrane; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Transport proteins

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(multidrug; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf10; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf11; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf1; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf2; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf3; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf4; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf5; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf6; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf7; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf8; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Gene, microbial
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(orf9; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT Enzymes, analysis
RL: ANT (Analyte); ANST (Analytical study)
(tailoring; ***everninomicin*** biosynthetic genes in

Micromonospora carbonacea)

IT Transcription factors

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(.sigma.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351394-42-8P 351394-43-9P 351394-44-0P 351394-46-2P 351394-47-3P
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351395-03-4P 351395-04-5P 351395-05-6P 351395-06-7P 351395-07-8P
351395-08-9P 351395-09-0P 351395-10-3P 351395-11-4P 351395-12-5P
351395-13-6P 351395-14-7P 351395-15-8P 351395-16-9P 351395-17-0P
351395-18-1P 351395-19-2P 351395-20-5P 351395-21-6P 351395-22-7P
351395-23-8P 351395-24-9P 351395-25-0P 351395-26-1P 351395-27-2P
351395-29-4P 351395-30-7P 351395-31-8P 351395-32-9P 351395-33-0P
351395-34-1P 351395-35-2P 351395-36-3P 351395-37-4P 351395-38-5P
351395-39-6P 351395-40-9P 351395-41-0P

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(amino acid sequence; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 480-64-8P, orsellinic acid

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)

(biosynthesis; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9033-07-2, glycosyltransferase

RL: ANT (Analyte); ANST (Analytical study)

(***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9001-18-7P, lipoamide dehydrogenase 9001-40-5P, Dehydrogenase, glucose-6-phosphate 9001-63-2P, Lysozyme 9001-92-7P, Protease 9012-30-0P, acetyltransferase 9015-72-9P, Dehalogenase 9023-90-9P, Methylmalonyl-CoA mutase 9023-94-3P, propionyl-CoA carboxylase 9026-03-3P, DTDP-glucose synthetase 9026-39-5P, Uridine kinase 9026-43-1P, Serine threonine kinase 9026-97-5P, Deoxyribose-phosphate aldolase 9027-41-2P, Hydrolase 9028-86-8P, Aldehyde dehydrogenase 9028-93-7P, IMP dehydrogenase 9030-24-4P, uracil phosphoribosyltransferase 9031-09-8P, Phosphotransferase 9031-96-3P, peptidase 9033-25-4P, methyl transferase 9035-73-8P, Oxidase 9045-37-8P, 6-Methylsalicylate synthetase 37211-59-9P, GDP-mannose 4,6-dehydratase 37259-54-4P, DTDP-glucose dehydratase 39369-30-7P, rRNA methyltransferase 52350-85-3P, integrase 59536-73-1P, Phosphomannomutase 67340-07-2P, Acyl-CoA carboxylase 121684-25-1P, Orsellinic acid synthase 128964-89-6P, cytochrome D oxidase 259093-18-0P, Epimerase, thymidine diphosphoglucose

RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST

(Analytical study); BIOL (Biological study); PREP (Preparation)
(***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 53024-98-9P, ***everninomicin***
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9031-66-7P, Aminotransferase 9044-86-4P, Dehydratase 9055-15-6P, Oxidoreductase 37342-00-0P, Epimerase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(hexose; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9035-51-2P, P450, properties 9046-59-7P, Hydroxylase 9055-20-3P, Chloroperoxidase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homol.; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 9028-06-2P, L-Proline-4-hydroxylase
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(homolog; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351395-28-3P 351395-42-1P 351540-05-1P
RL: ANT (Analyte); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(nucleotide sequence; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351396-41-3 351396-42-4 351396-43-5 351396-44-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; ***everninomicin*** biosynthetic genes in Micromonospora carbonacea)

IT 351396-45-7 351396-46-8 351396-47-9 351396-48-0 351396-49-1
RL: PRP (Properties)
(unclaimed sequence; ***everninomicin*** biosynthetic genes in M

SYSTEM LIMITS EXCEEDED

L18 ANSWER 2 OF 2 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 77051095 MEDLINE
DOCUMENT NUMBER: PubMed ID: 993103
TITLE: Studies on juvenimicin, a new antibiotic. I. Taxonomy, fermentation and antimicrobial properties.
AUTHOR: Hatano K; Higashide E; Shibata M
SOURCE: Journal of antibiotics, (1976 Nov) 29 (11) 1163-70. Journal code: 0151115. ISSN: 0021-8820.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197701
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313

Entered Medline: 19770125

AB An ***actinomycete*** , strain No. T-1124, was found to produce new macrolide antibiotics, juvenimicins. Based on the results of taxonomic studies, the strain was considered to be a new variety of micromonospora chalcea and the name Micromonospora chalcea var. izumensis is proposed. This strain also produced ***everninomicin*** . The production of juvenimicins was stimulated by addition of ferrous sulfate and magnesium sulfate in the fermentation medium. Among juvenimicins, juvenimicin A3 exhibited the most potent antimicrobial activities against gram-positive bacteria and furthermore was active against gram-negative bacteria.

AB An ***actinomycete*** , strain No. T-1124, was found to produce new macrolide antibiotics, juvenimicins. Based on the results of taxonomic studies, the strain. . . be a new variety of micromonospora chalcea and the name Micromonospora chalcea var. izumensis is proposed. This strain also produced ***everninomicin*** . The production of juvenimicins was stimulated by addition of ferrous sulfate and magnesium sulfate in the fermentation medium. Among juvenimicins,. . .

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(FILE 'HOME' ENTERED AT 12:33:52 ON 01 JUL 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:34:16 ON 01 JUL 2004

L1 352 S EVERNINOMICIN
L2 4 S L1 (3A) BIOSYNTHE?
L3 0 S L1 AND GENE (2A) PATH?
L4 20 S L1 AND GENE
L5 3135 S MICROMONOSPORA
L6 72 S MICROMONOSPORA CARBONACEA
L7 7464 S ACTINOMYCETE
L8 327 S L5 AND L7
L9 21 S M. CARBONACEA
L10 75 S L6 OR L9
L11 26 S L10 AND L1
L12 20 DUP REM L11 (6 DUPLICATES REMOVED)
L13 4 DUP REM L2 (0 DUPLICATES REMOVED)
L14 16 DUP REM L4 (4 DUPLICATES REMOVED)
L15 4 S L8 AND L1
L16 2 DUP REM L15 (2 DUPLICATES REMOVED)
L17 4 S L1 AND L7
L18 2 DUP REM L17 (2 DUPLICATES REMOVED)

=> s l1 not (l4 or l11 or l15 or l17)
L19 306 L1 NOT (L4 OR L11 OR L15 OR L17)

=> dup rem l19
PROCESSING COMPLETED FOR L19
L20 189 DUP REM L19 (117 DUPLICATES REMOVED)

=> d ibib abs 1-10 l20

L20 ANSWER 1 OF 189 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:182674 CAPLUS
DOCUMENT NUMBER: 140:210736
TITLE: Antibiotics for preventing bacteremias
INVENTOR(S): Leach, Timothy S.; Packman, Jeffrey

PATENT ASSIGNEE(S): Genome Therapeutics Corporation, USA
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004017925	A2	20040304	WO 2003-US26907	20030825

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-405800P P 20020823

AB The present invention provides methods and compns. useful for preventing bacteremia by decolonizing the intestinal tract of a patient. Although the present invention is useful for preventing bacteremia by any Gram-pos. bacteria, it is particularly useful against antibiotic-resistant bacteria, such as vancomycin-resistant Enterococcus (VRE), methicillin-resistant Staphylococcus aureus (MRSA), glycopeptide intermediary susceptible Staphylococcus aureus (GISA), and penicillin-resistant Streptococcus pneumoniae (PRSP). Decolonization therapy using the methods and compns. of this invention are also useful for preventing a Gram neg. bacteremia. An example is given show decolonization therapy in a high risk patient using daptomycin.

L20 ANSWER 2 OF 189 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2004318534 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 15088132
TITLE: Effects of SCH27899 (Ziracin), an oligosaccharide ***everninomicin*** antibiotic, on urate kinetics in humans.
AUTHOR: Nagashima Satoru; Niwa Masayuki; Nishiki Katsuyuki; Hosoya Tatsuo; Hishida Akira; Uematsu Toshihiko
CORPORATE SOURCE: 1st Department of Internal Medicine, Hamamatsu University School of Medicine, 431-3192, Hamamatsu, Japan.
SOURCE: European journal of clinical pharmacology, (2004 Jun) 60 (4) 255-64.
Journal code: 1256165. ISSN: 0031-6970.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-DATA-REVIEW; IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20040629
Last Updated on STN: 20040629

AB OBJECTIVE. Intravenous administration of an ***everninomicin*** antibiotic, SCH27899 (Ziracin), in healthy subjects caused a marked decrease in serum urate by increasing its urinary excretion, as well as an

increase in serum bilirubin in a dose-dependent manner. To clarify the underlying mechanism, a crossover study and an in vitro study were conducted. METHODS. Crossover study was performed in nine healthy male volunteers over three periods by administering SCH27899 (1-h i.v. infusion of 3 mg/kg) alone, probenecid (2000 mg, p.o.) alone and their combination. Also, an in vitro experiment was conducted using rat brush-border membrane vesicles to elucidate the effect of SCH27899 on urate transport across renal tubular epithelium. RESULTS. SCH27899 alone and probenecid alone showed a uricosuric, serum urate-lowering effect, and, when given in combination, the effects on serum urate appeared to be additive, as indicated in the earlier phase, prior to the peaks of respective drug effects. Serum and urinary concentrations of SCH27899 were not influenced by the co-administration of probenecid. Serum bilirubin was also significantly increased by both SCH27899 alone and in combination with probenecid. The SCH27899-probenecid combination additive effect on serum bilirubin did not reach significance. SCH27899, probenecid and losartan, an angiotensin-II-receptor antagonist possessing a uricosuric effect, significantly inhibited (14)C-urate uptake into the vesicles, which was dependent on the pH gradient across the membrane; whereas, vancomycin did not. CONCLUSION. It is concluded that SCH27899 itself contributes, at least in part, to a uricosuric effect following i.v. infusion. However, some metabolite(s) may also contribute to this, since the degree of urate-uptake inhibition by SCH27899 was less than probenecid and losartan, and the serum urate-lowering effect was delayed and prolonged compared with the time profile of serum concentration.

L20 ANSWER 3 OF 189 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2004117591 EMBASE
TITLE: [Clinical manifestations and treatment of Lyme disease]. KLINICKE PROJEVY A LECBA LYMSKE BORELIOZY.
AUTHOR: Honegr K.; Dostal V.
CORPORATE SOURCE: Dr. K. Honegr, Klinika Infekcnich Nemoci, Fakulti Nemocnice, 500 05 Hradec Kralove, Czech Republic. honegr@lfhk.cuni.cz
SOURCE: Klinicka Mikrobiologie a Infekcni Lekarstvi, (2004) 10/1 (5-10).
Refs: 33
ISSN: 1211-264X CODEN: KMILAV
COUNTRY: Czech Republic
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
017 Public Health, Social Medicine and Epidemiology
037 Drug Literature Index
LANGUAGE: Czech
SUMMARY LANGUAGE: Czech; English

AB Survey of criteria necessary to establish the diagnosis of Lyme disease according to its definitions by various organizations and institutions in the USA and Europe (European Union Concerted Action on Lyme Borreliosis, Centers for Disease Control and Prevention, The International Lyme and Associated Diseases Society). In the discussion the authors present other possible clinical manifestations connected with the involvement of various organs. In the second part of their paper they describe patterns of therapy for individual forms of Lyme disease in Europe and the USA and their differences.

L20 ANSWER 4 OF 189 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:635337 CAPLUS
TITLE: Award Address (Tetrahedron Prize for Creativity in Organic Chemistry, sponsored by Elsevier Science). Perspectives in total synthesis
AUTHOR(S): Nicolaou, K. C.
CORPORATE SOURCE: Department of Chemistry & Biochemistry, The Scripps Research Institute and the University of California, San Diego, La Jolla, CA, 92037, USA
SOURCE: Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), ORGN-249. American Chemical Society: Washington, D. C.
CODEN: 69EKY9
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Following a short personal introduction, in this lecture K. C. Nicolaou will present a retrospective on his research activities in the field of chem. synthesis from the early days of his graduate career in the late 1960s to the present. Although these endeavors span more than three decades, the covered topics are unified by the same underlying themes of synthesis, new synthetic technologies and chem. biol. The total syntheses of natural products whose stories will bring these themes to light in this lecture include, among others, those of the endiandric acids, efrotomycin, amphotericin B, calicheamicin .gamma.1I, rapamycin, TaxolTM, the brevetoxins, the epothilones, vancomycin, the CP-mols., the bisorbicillinoids, ***everninomicin*** , the coleophomones, and diazonamide A.

L20 ANSWER 5 OF 189 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:990367 CAPLUS
DOCUMENT NUMBER: 140:339533
TITLE: Synthesis of complex carbohydrates: ***everninomicin*** 13,384-1
AUTHOR(S): Nicolaou, K. C.; Mitchell, Helen J.; Snyder, Scott A.
CORPORATE SOURCE: Department of Chemistry, The Scripps Research Institute, La Jolla, CA, 92037, USA
SOURCE: Carbohydrate-Based Drug Discovery (2003), Volume 1, 215-252. Editor(s): Wong, Chi-Huey. Wiley-VCH Verlag GmbH & Co. KGaA: Weinheim, Germany.
CODEN: 69EWXA; ISBN: 3-527-30632-3
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review focuses on the total synthesis of the antibiotic ***everninomicin*** 13,384-1, a mol. that perhaps represents the most complex oligosaccharide-based structure synthesized to date.
REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 189 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2003176020 EMBASE
TITLE: Antimicrobial growth promoters used in animal feed: Effects of less well known antibiotics on gram-positive bacteria.
AUTHOR: Butaye P.; Devriese L.A.; Haesebrouck F.
CORPORATE SOURCE: P. Butaye, VAR-CODA-CERVA, Groeselenberg 99, B1180 Brussels, Belgium. pabut@var.fgov.be
SOURCE: Clinical Microbiology Reviews, (1 Apr 2003) 16/2 (175-188).

Refs: 247
ISSN: 0893-8512 CODEN: CMIREX
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB There are not many data available on antibiotics used solely in animals and almost exclusively for growth promotion. These products include bambermycin, avilamycin, efrotomycin, and the ionophore antibiotics (monensin, salinomycin, narasin, and lasalocid). Information is also scarce for bacitracin used only marginally in human and veterinary medicine and for streptogramin antibiotics. The mechanisms of action of and resistance mechanisms against these antibiotics are described. Special emphasis is given to the prevalence of resistance among gram-positive bacteria isolated from animals and humans. Since no susceptibility breakpoints are available for most of the antibiotics discussed, an alternative approach to the interpretation of MICs is presented. Also, some pharmacokinetic data and information on the influence of these products on the intestinal flora are presented.

L20 ANSWER 7 OF 189 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:162549 CAPLUS
DOCUMENT NUMBER: 139:164919
TITLE: Negative ion multiple-stage mass spectrometric analysis of complex oligosaccharides (everninomicins) in a quadrupole ion trap: implications for charge-remote fragmentation
AUTHOR(S): Ganguly, A. K.; Chen, Guodong; Pramanik, Birendra N.; Daaro, Ibrahim; Luk, Emily; Bartner, Peter L.; Saksena, Anil K.; Girijavallabhan, Viyyoor M.
CORPORATE SOURCE: Dept. of Chemistry and Chemical Biology, Stevens Inst. of Technology, Hoboken, NJ, 07030, USA
SOURCE: ARKIVOC (Gainesville, FL, United States) (2003), (3), 31-44
CODEN: AGFUAR
URL: http://www.arkat-usa.org/ark/journal/2003/Sikh%20Dev/SD-592C/592C.pdf
PUBLISHER: Arkat USA Inc.
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English

AB Neg. ion electrospray ionization (ESI) tandem mass spectrometry (MS/MS) by a quadrupole ion-trap has been utilized to characterize a class of complex oligosaccharide antibiotics (everninomicins), that includes everninomicins-D, SCH 27899, amino everninomicins (SCH 27900), and SCH 49088 contg. a hydroxylamino-ether sugar. The deprotonated mols. are dominant ions in the neg. ion ESI mass spectra of these compds. The multiple-stage mass spectrometric anal. (MSn) of these deprotonated species indicates that the neg. charge residues in the deprotonated dichlorophenoxyl groups in the substituted arom. ester ring (ring 1) and the fragmentation occurs remote to this charge site in generating simple sugar sequence-specific fragment ions. One exception to this process is SCH 49088 in which the side chain of the hydroxylamino-ether sugar dominates fragmentation pathway in a charge-driven mechanism and results in less structural information.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 8 OF 189 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2003366010 EMBASE
TITLE: Chemical and functional diversity of small molecule ligands for RNA.
AUTHOR: Hermann T.
CORPORATE SOURCE: T. Hermann, Dept. Compl. Chem./Struct./RNA B., Anadys Pharmaceuticals, Inc., 9050 Camino Santa Fe, San Diego, CA 92121, United States. thermann@anadyspharma.com
SOURCE: Biopolymers, (2003) 70/1 (4-18).
Refs: 132
ISSN: 0006-3525 CODEN: BIPMAA
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Functional RNAs such as ribosomal RNA and structured domains of mRNA are targets for small molecule ligands that can act as modulators of the RNA biological activity. Natural ligands for RNA display a bewildering structural and chemical complexity that has yet to be matched by synthetic RNA binders. Comparison of natural and artificial ligands for RNA may help to direct future approaches to design and synthesize potent novel scaffolds for specific recognition of RNA targets. .COPYRGT. 2003 Wiley Periodicals, Inc.

L20 ANSWER 9 OF 189 MEDLINE on STN
ACCESSION NUMBER: 2002625847 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12384386
TITLE: Mutations in ribosomal protein L16 and in 23S rRNA in Enterococcus strains for which evernimicin MICs differ.
AUTHOR: Zarazaga Myriam; Tenorio Carmen; Del Campo Rosa; Ruiz-Larrea Fernanda; Torres Carmen
CORPORATE SOURCE: Area de Bioquimica y Biologia Molecular, Universidad de La Rioja, Logrono, Spain.
SOURCE: Antimicrobial agents and chemotherapy, (2002 Nov) 46 (11) 3657-9.
Journal code: 0315061. ISSN: 0066-4804.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 20021018
Last Updated on STN: 20030325
Entered Medline: 20030324
AB Mutations in ribosomal protein L16 and in 23S rRNA were investigated in 22 Enterococcus strains of different species and for which the MICs of evernimicin differ (MICs, 0.023 to 16 micro g/ml). Amino acid changes (Arg56His, Ile52Thr, or Arg51His) in protein L16 were found in seven strains, and a nucleotide G2535A mutation in 23S rRNA was found in 1 strain among 13 for which the MICs are > or =1 micro g/ml.

L20 ANSWER 10 OF 189 MEDLINE on STN DUPLICATE 2

ACCESSION NUMBER: 2002681958 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12443022
TITLE: Multiple-stage mass spectrometric analysis of complex oligosaccharide antibiotics (everninomicins) in a quadrupole ion trap.
AUTHOR: Chen Guodong; Pramanik Birendra N; Bartner Peter L; Saksena Anil K; Gross Michael L
CORPORATE SOURCE: Schering-Plough Research Institute, Kenilworth, New Jersey 07033, USA.. guodong.chen@spcorp.com
CONTRACT NUMBER: P41RR00954 (NCRR)
SOURCE: Journal of the American Society for Mass Spectrometry, (2002 Nov) 13 (11) 1313-21.
Journal code: 9010412. ISSN: 1044-0305.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200301
ENTRY DATE: Entered STN: 20021122
Last Updated on STN: 20030117
Entered Medline: 20030116

AB Electrospray ionization (ESI) quadrupole ion-trap tandem mass spectrometry (MS/MS) was utilized to characterize a class of complex oligosaccharide antibiotics (everninomicins) that include SCH 27899, ***everninomicin*** -D, amino ***everninomicin*** (SCH 27900), and SCH 49088 (containing a hydroxylamino-ether sugar). The addition of sodium chloride (approximately 1 microg/mL) facilitates the formation of abundant metal complex ions, and this was used because protonation does not readily occur for most of these compounds. The multiple-stage mass analysis (MS(n)) of the sodiated species provides an important series of fragment ions that are specific for sugar sequence and for some sugar-ring opening. These data suggest a general charge-remote fragmentation pattern with the sodium cation residing in a specific, central location of the sugar chain and fragmentation occurring to trim the end of the molecule. For protonated ***everninomicin*** (SCH 27900), however, the proton appears to be mobile during the collisional activation process, opening different fragmentation pathways depending on the proton location. The use of water and acetonitrile with 0.1% acetic acid as the solvent in ESI-MS promotes rapid hydrolysis of the central ortho ester, resulting in the formation of abundant sodiated products that are hydrated. These product ions of the hydrated molecules are likely formed by the same charge-remote fragmentation processes as those that occur for the unhydrolyzed precursor.

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FULL ESTIMATED COST	146.94	147.15

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-21.32	-21.32

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